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BULLETIN
OF
A. & T. COLLEGE

Published by
**THE AGRICULTURAL AND TECHNICAL
COLLEGE OF NORTH CAROLINA**

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Issued Quarterly
GREENSBORO, NORTH CAROLINA

CALENDAR 1951-1952

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BULLETIN
OF THE
Agricultural and Technical
College
OF NORTH CAROLINA
(Co-Educational Institution)

FIFTY-SIXTH ANNUAL CATALOGUE

1950-1951

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With Announcements for

Greensboro, N. C. 27411

1951-1952

Recognized as A STANDARD "A" GRADE COLLEGE
by the North Carolina Department of Education, the
Council of Education of the State of Pennsylvania, the
American Medical Association, the Southern Asso-
ciation of Colleges and Secondary Schools.

GREENSBORO, NORTH CAROLINA

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COLLEGE CALENDAR

1951-1952

September 10-11, 1951—Pre-Session Faculty-Staff Conferences
September 12-13—Freshman Orientation and Medical Examination
September 13-14—Freshman Medical Examination and Registration
September 14-15—Upperclassmen Medical Examination
September 17—Upperclassmen Medical Examination and Registration
September 18—Classes begin
September 25—Last day for change in schedule
December 17-18-19-20—Fall Quarter Examinations
January 2, 1952—Registration for Winter Quarter
January 3—Classes begin
January 10—Last day for change in schedule
March 18-19-20-21—Winter Quarter Examinations
March 24—Registration for Spring Quarter
March 25—Classes begin
March 31—Last day for change in schedule
May 26-27-28-29—Spring Quarter Examinations
May 30—Senior Class Day
June 1—Baccalaureate
June 2—Commencement

HOLIDAYS

Thanksgiving, November 22-23, 1951
Christmas Holidays, December 21, 1950-January 2, 1952
Easter Holidays—Friday through Monday, April 11-14, 1952

SPECIAL DAYS

Dudley Day—November 2, 1951
American Education Week—November 6-12, 1950
Religious Emphasis Week—January 13-16
Douglas' Birthday and Negro History Week (Joint Observance) February 5-12, 1952
Arbor Day—March 15, 1952—(Special Program by School of Agriculture)
National Negro Health Week—April 1-8, 1952
Morrill's Birthday—April 14, 1952—(Special programs by Agricultural and Mechanical Arts Societies)

COLLEGE PUBLICATIONS

The Bulletin of the A. and T. College published annually as the official catalogue of the College.

The Bulletin of the A. and T. College Summer Session, published annually as the official catalogue of the Summer School.

The Bulletin of the Graduate Division of the A. and T. College, published annually.

Annual Pictorial Issue of the Bulletin.

The A. and T. College Student Handbook, published annually for general information and guidance of the students.

The Register, the official organ of the student body, published monthly. Edited and managed by the student body under the supervision of the College staff.

Bulletin of the A. and T. College, Research Supplement, October, 1944, and August, 1946.

Bulletin of the A. and T. College, Non-Collegiate Trade, Vocational and Special Courses.

TABLE OF CONTENTS

(See Also Index in Last Pages of Bulletin)

	Page
Board of Trustees	7
Officers of Administration and Instruction	9
History of the College.....	26
College Buildings	27
General Information	31
Admission to College	31
Schedule Regulations	35
Dormitory Regulations	38
General Graduation Regulations.....	39
Student Organizations	40
Scholarships and Prizes	44
Evening School	47
Summer School	47
Expenses and Fees	48
Institutional Organizations	55
The School of Agriculture	55
The School of Mechanic Arts	59
The School of Education and Science	61
The Graduate School	67
Vocational School	185
Description of Courses	78
Dept. of Agriculture and Home Economics Education.....	78
Agricultural Education	78
Home Economics Education	80
Dept. of Agricultural Economics	81
Rural Sociology	84
Dept. of Animal Industry	84
Animal Husbandry	85
Dairy Husbandry	86
Poultry Husbandry	86
Dept. of Architectural Engineering	87
Dept. of Biology	90
Bacteriology	90
Botany	91
General Science	91
Zoology	92
Dept. of Business Administration	93
Business Administration	93
Commercial Education	96
Dept. of Chemistry	101
Biochemistry	102
Chemistry	102

	Page
Dept. of Education	104
Dept. of Electrical Engineering	110
Dept. of English Language and Literature	113
Dept. of Fine Art	118
Dept. of Foreign Language	123
French	124
Spanish	126
Dept. of Home Economics	126
Child Development and Family Relationship	127
Clothing, Textiles and Related Art	128
Foods and Nutrition	129
Home Administration	130
Dept. of Industrial Education	130
Industrial Arts Education	131
Vocational Education	137
Vocational Industrial Education	132
Dept. of Mathematics	140
Dept. of Mechanical Engineering	145
Dept. of Military Science and Tactics	149
Dept. of Music	152
Dept. of Physical Education	157
Dept. of Physics	166
Dept. of Plant Industry	171
Agricultural Engineering	171
Field Crops	172
Fruits and Vegetable Production	173
Geology	174
Ornamental Horticulture	174
Soils	175
Religion and Ethics	176
Research	176
Dept. of Social Science	177
Economics	183
Geography	181
History	178
Political Science	180
Sociology	181
Vocational Courses	186
Auto Mechanics	186
Cabinet Making and Upholstering	192
Carpentry	190
Elective Vocational Courses	198
Masonry	187
Plumbing and Steamfitting	194
Shoe Repairing and Leather Work	189

Tailoring	195
Welding	197
Awards and Honors 1950	203
Certificates, Trade, 1950.....	208
Distribution of Enrollment by States and Counties in N. C.....	218

BOARD OF TRUSTEES
THE
AGRICULTURAL AND TECHNICAL COLLEGE

J. WILSON ALEXANDER	Huntersville, N. C.
GEORGE T. ASHFORD	Red Springs, N. C.
SHELLEY B. CAVENESS	Greensboro, N. C.
C. H. DEARMON	Statesville, N. C.
CLYDE A. ERWIN	Raleigh, N. C.
ROBERT H. FRAZIER	Greensboro, N. C.
G. FOSTER HANKINS	Lexington, N. C.
C. A. HINES	Greensboro, N. C.
J. W. JAMES	Ahoskie, N. C.
J. W. JEFFRIES	Mebane, N. C.
W. L. T. MILLER	Greensboro, N. C.
A. A. MORRISEY	Winston-Salem, N. C.
GUY B. PHILLIPS	Chapel Hill, N. C.
WADE H. PASCHAL	Siler City, N. C.
H. A. SCOTT	Haw River, N. C.
GEORGE SOCKWELL	Gibsonville, N. C.

OFFICERS ADMINISTRATION AND INSTRUCTION THE AGRICULTURAL AND TECHNICAL COLLEGE

Officers of Administration

FERDINAND D. BLUFORD, A.B., B.Ped., D.Ped.....	<i>President</i>
C. R. A. CUNNINGHAM, B.S., M.S.....	<i>Registrar</i>
WILLIAM H. GAMBLE, B.S.....	<i>Dean of Men</i>
WARMOTH T. GIBBS, A.B., Ed.M..	<i>Dean, School of Education and Science</i>
E. RAY HODGIN	<i>Secretary-Treasurer</i>
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WILLIAM E. REED, B.S., M.S., Ph.D.....	<i>Dean, School of Agriculture</i>
SIDNEY B. SIMMONS, B.S.A.....	<i>Director, Vocational Agriculture</i>
SAMUEL C. SMITH, B.S., M.S.....	<i>Assistant State Supt. of Trades</i>
JEAN W. SPINNER, B.S., M.S.....	<i>Dean of Women</i>
NATHANIEL C. WEBSTER.....	<i>Bursar</i>
FREDERICK ALLEN WILLIAMS, B.S., M.A., Ph.D...	<i>Dean, Graduate School</i>

Associates and Assistants of Administration

FRANCES A. ADAMS, B.S.....	<i>Secretary to Dean</i> <i>School of Mechanic Arts</i>
ROSEBUD APPLEBY, R.N.....	<i>College Nurse</i>
CATHERINE DERR BANKS, B.S.....	<i>Secretary to College Guidance Center</i>
EARL CLARK, B.S.....	<i>Assistant Dean of Men</i>
JESSIE M. COLLINS, B.S.....	<i>Secretary Teacher Trainer</i>
THELMA COLMAN, B.A.....	<i>Dietitian</i>
ALEXANDER CORBETT, B.S.....	<i>Director of College Guidance</i> <i>Center for Veterans</i>
MARGARET L. CORBETT, B.S.....	<i>House Directress</i>
C. C. DEAN, B.S.....	<i>Reference Librarian</i>
MARY L. DOGGETT, B.S..	<i>Secretary to Director of Vocational Agriculture</i>
CLARESSA ALETHYA DOUGLAS, B.S.....	<i>Secretary to Librarian</i>
MARY L. DOZIER, B.S.....	<i>Assistant Dean of Women</i>
VIRGINIA DURHAM, B.S.....	<i>Secretary to the President</i>
BERNICE M. EDWARDS.....	<i>Secretary to the Secretary-Treasurer</i>
W. J. FISHER, B.S.....	<i>Secretary of State N. F. A.</i>
ROSETTA B. FLORANCE.....	<i>Secretary to Dean of Men</i>
ALLISON GORDON, B.S.....	<i>College Postman</i>
ELIZABETH E. GARRETT, B.S.....	<i>Assistant in Treasurer's Office</i>
CARRIE W. HARPER, B.S.....	<i>Secretary to the Bursar</i>
DOROTHY M. HINNANT, B.S.....	<i>Assistant Dietitian</i>
MARTIN F. HOLT.....	<i>Superintendent of Farms</i>

SADIE AUSTRALIA HAYES, B.S.	<i>Secretary to Dean, School of Agriculture</i>
ARTHUR HEADEN, B.S.	<i>Assistant Dean of Men</i>
CHARLES A. HINSON, B.S.	<i>Custodian</i>
BERTHA I. HORNE, B.S.	<i>Assistant Manager of Bookstore</i>
GLADYS MABEL HORNE, B.S.	<i>Clerk, Treasurer's Office</i>
NANCY C. MCCLAIN, B.S.	<i>Assistant Bursar</i>
EUGENE MARROW, B.S.	<i>Assistant Dean of Men</i>
ALMENA MULDROW, B.S.	<i>Assistant to Librarian</i>
ANNIE J. MILLS, B.S.	<i>Recorder in the Registrar's Office</i>
GLENICE MAE MILLS, B.S.	<i>Secretary, Veterans' Guidance Center</i>
JESSIE P. MURRILL, B.S.	<i>Recorder, Registrar's Office</i>
ANNIE R. MASSEY, B.S.	<i>Transcript Recorder, Registrar's Office</i>
DOROTHY H. MILLER, B.S.	<i>Secretary to the Bursar</i>
T. E. NEAL	<i>Superintendent of Power Plant</i>
THELMA FAIRFAX PEARSALL, B.S., B.S.L.S.	<i>Library Assistant</i>
DAISY B. ROLLINS, B.S.	<i>Secretary to Manager, College Bookstore</i>
MARTHA CARDELL RUE, B.S.	<i>Secretary to Director</i> <i>Vocational Industrial Education</i>
EULA E. SAMUELS, B.S.	<i>Library Assistant</i>
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ALLIE THOMPSON	<i>Secretary, Graduate School</i>
HELEN L. THOMPSON, B.S.	<i>Secretary to the Registrar</i>
MARY L. THOMPSON, B.S.	<i>Assistant Reserve Librarian</i>
RUBY E. D. M. TROXLER, B.S.	<i>Secretary, Treasurer's Office</i>
CATHERINE TRUESDELL	<i>Secretary to Physical Education Dept.</i>
EDWARD WADDELL, B.S.	<i>Director of Housing Project</i> <i>and Supt. Buildings and Grounds</i>
THELMA WADDELL, B.S., R.N., M.T.	<i>College Nurse</i>
LUCILLE HOLCOMBE WEBB, B.S.	<i>Secretary to Dean, School of</i> <i>Education and Science</i>
LUCYNDIA STEWART WHITE, R.N., C.P.M.N.	<i>College Nurse</i>
GEORGIANNA I. WITHERS, B.S.	<i>Secretary, Alumni Association</i>
MILDRED WYATT, B.S.	<i>Assistant Registrar</i>

Officers of Army Administration

HENRY R. SANDRIDGE, Lt. Col.	<i>PMS&T</i>
THOMAS H. WRIGHT, Major	<i>Asst. PMS&T</i>
RAYMOND A. MONTGOMERY, Major	<i>Asst. PMS&T</i>
JOSEPH L. STEPHENSON, Captain	<i>Asst. PMS&T</i>
HUBERT S. GASKIN, JR., 1st Lt.	<i>Asst. PMS&T</i>
FRED A. MADDOX, WOJG	<i>Administrative Assistant</i>
JOSHUA M. WILBURN, Master Sergeant	<i>Instructor</i>
CLEOPHAS HOGAN, Master Sergeant	<i>Asst. Instructor</i>
REE HUTCHIN, Master Sergeant	<i>Asst. Instructor</i>
SILAS CHRISTIAN, Sergeant First Class	<i>Administrative NCO</i>
DAVID VANN, Sergeant First Class	<i>Instructor</i>
HUBERT L. RICH, Sergeant	<i>Asst. Administrative NCO</i>

Officers of Instruction

PROFESSORS

FERDINAND D. BLUFORD.....A. and T. College

President of the College

A.B., Virginia Union University, 1908; B.Ped., Howard University, 1909; Graduate work Columbia University, 1924; D.Ped., Virginia Union University, 1926. Dean Agricultural and Mechanical College of Alabama, 1909-1910; Professor of Education, Kentucky State College, 1910-1911; Professor of English, St. Paul Normal and Industrial School, 1911-1912; Professor of English, A. and T. College, 1912-1918; Dean, A. and T. College, 1918-1925; Present position since 1925.

LITTLETON ALEXANDER ALSTON.....1204 Salem Street

English

B.A., Virginia State College, 1939; M.A., *ibid.*, 1940; M.A., Columbia University, 1945; Professional Diploma in Teaching English, Ed.D., *ibid.*, 1950. Former positions: Principal Elementary School, Stony Creek, Va.; 1940-1942; Instructor of English, Sussex County Training School, Waverly, Va., 1942-1944. Present position since 1946.

***WILLIAM M. BELL**.....College Campus

Coach-Director of Physical Education

B.A., Ohio State University; M.A., Ohio State University. Assistant Coach, Howard University, 1932-1933; Director of Athletics and Head Coach, Chaffin College, 1934-1935; Director of Physical Education and Head Coach, Florida A. and M. College, 1936-1942; Assistant Director of Physical Training and Coach, Tuskegee Army Air Field, 1944-1945. Present position since 1945.

COLERIDGE ALEXANDER BRAITHWAITE.....2601 E. Market Street

Director of Music

A.B., Harvard College, 1939; M.A., *ibid.*, 1941; Instructor in Music, Fisk University, 1940-1941; Further study, 1942. Present position since 1943.

JAMES A. COLSTON.....824 Pearson Street

Education

B.S., Morehouse College; M.A., Atlanta University; Ph.D., New York University. Former positions: Director, Ballard School, Macon, Ga., President Bethune-Cookman College, Daytona Beach, Florida; Director of Public Relations, Hampton Institute; President Georgia State, Savannah, Ga.; Lecturer in Education, New York University. Present position since 1950.

CAROLYN E. CRAWFORD.....College Campus

Home Economics

B.S., Columbia University, 1932; M.A., *ibid.*, 1933; Further study, Columbia University, 1945-46. Former position, Instructor Prairie View State College. Present position since 1933.

WARMOTH T. GIBBS.....420 N. Dudley Street

Dean, School of Education and Science-Professor of Political Science

A.B., Harvard University; Ed.M., *ibid.*; Completed one year and a half beyond the Master's Degree, *ibid.*; Professor of History, 1926-1929; Dean, School of Education and Sciences. Present position since 1929.

ARTIS P. GRAVES.....A. and T. College

Biology

B.S., Bluefield State College, 1931; M.S., University of Iowa, 1938; Ph.D., *ibid.*, 1943. Former positions: Science Instructor and Head Coach, Morristown College, 1931-1934; Science Instructor and Head Coach Shorter College, 1935-1936. Science Instructor and Assistant Coach, Morris-Brown College, 1936-1939; Chairman, Division of Science and Mathematics, 1943-1950. Director of Science Workshop, Southern University. Present position since 1950.

*On leave of absence—1950-1951.

WADARAN L. KENNEDY.....A. and T. College Farm

Dairy Husbandry

B.S., University of Illinois, 1927; M.S., *ibid.*, 1929; Ph.D., Pennsylvania State College, 1936; Professor of Animal Husbandry, Virginia State College, 1929-1931; Assistant Professor of Animal Husbandry, Langston University, 1931-1933; Graduate Scholar in Dairy Husbandry, The Pennsylvania State College, 1933-1936. Present position since 1936.

JERALD M. MARTEENA.....1900 Gorrell Street

Dean, School of Mechanic Arts and Professor of Mechanical Engineering

B.M.E., Ohio State University, 1928; M.S., University of Michigan, 1932; Completed one year and one summer beyond Master's Degree, University of Michigan, 1933; Professor of Mathematics A. and T. College, 1929-1931. Present position since 1933.

ISAAC H. MILLER, JR.....A. and T. College

Biochemistry

B.S., Livingstone College; M.S., University of Wisconsin; Ph.D., *ibid.* Present position since 1950.

JOHN C. McLAUGHLIN.....910 Benbow Road

Agricultural Economics and Rural Sociology

B.S.A., A. and T. College, 1931; M.S., Cornell University, 1932; Alcorn A. and M. College, 1932-1937. Present position since 1937.

HOWARD T. PEARSALL.....1112 Duke Street

Music

B.A., Fisk University; M.A., Western Reserve. Former positions: A. and M. College, Normal, Alabama; Cleveland, Ohio Public Schools; Storer College, Harper's Ferry, West Virginia; Tougaloo College, Tougaloo, Mississippi. Present position since 1950.

WILLIAM E. REED.....College Campus

Dean, School of Agriculture and Professor of Soils

B.S., Southern University, 1937; M.S., Iowa State College, 1941; Ph.D., Cornell University, 1945. Present position since 1949.

CLARA V. REID.....A. and T. College

Home Economics

B.S., West Virginia State College; M.A., Columbia University. Former positions: Kelley Miller High School; Paine College; North Carolina College. Present position since 1950.

WAVERLYN NATHANIEL RICE, JR.....1504 Gorrell Street

French

A.B., Morehouse College, 1935; Diplome pour l'enseignement du français a l'etranger, University of Toulouse, France, 1936; docteur de l'Universite de Toulouse. (Letters), 1937; University of Mexico, Summer, 1939. Present position since 1937.

HENRY R. SANDRIDGE, Lt. Col. Inf..... 1709 Lindsay St.

Military Science and Tactics

Massachusetts School of Optometry 1927, "Company Commanders Course," The Infantry School 1941; "Battalion Commanders Course" The Infantry School 1942; "Division Staff Officers Course" Command and General Staff School, Fort Leavenworth, Kansas, 1943. Present position since 1950.

FREDERICK D. SMITH.....2601 East Market Street

Animal Husbandry-Veterinarian

B.S., Prairie View State College, M.S., Michigan State College, D.V.M., Michigan State College. Former position: George Washington Carver High School, Houston, Texas. Present position since 1949.

WILLIAM A. STREAT, JR. College Campus
Architecture

B.S., Hampton Institute; B.S., University of Illinois; S.M., Massachusetts Institute of Technology, 1949. Former position: U. S. Engineers, Cheyenne, Wyoming. Present position since 1949.

FREDERICK ALLEN WILLIAMS. 1013 Lindsay Street
Dean of Graduate School-Professor of Agricultural Economics

B.S., A. and T. College; M.A., Michigan State; Ph.D., University of Wisconsin. Former positions: Henderson Institute, 1931-1936; A. and T. College, 1937-1939; Southern University, 1939-1950.

WILSON ELBE WILLIAMS. 233 E. Gaston Street
Economics

B.A., Fisk University; A.M., Howard University; Ph.D., University of Southern California. Former positions: Economic Analyst, U. S. Employment Service; Asst. Professor of Economics, Lincoln University; Missouri, Economic Consultant, Research Worker. Present position since 1949.

BOOKER TALIAFERRO WHITE. 106 S. Luther Street
Chemistry

B.S., West Virginia State College, 1929; M.S., Ohio State University, 1937; Ph.D., Ohio State University, 1945. Former positions: Kittrell College, 1930-32; Coxie High School, Greenriver, N. C., 1932-36; Brewer Jr. College, Greenwood, S. C., 1937-38; Halifax County Training School, Weldon, N. C., 1938-40; Principal Morristown College, 1940-41; State A. & M., Normal, Ala., 1945-47. Present position since 1947.

ASSOCIATE PROFESSORS

WILLIAM E. ALEXANDER. A. and T. College
Animal and Dairy Husbandry

B.S., Hampton Institute, M.S., University of Wisconsin. Former positions: Tuskegee Institute, U. S. D. A. Bureau of Animal Industry. Present position since 1949.

ROY HOWARD BROWN. 310 Beech Street
English-Debating

B.S., Bluefield State College, 1937; M.A., Ohio State University, 1946; Instructor Kanawha County High School, Charleston, W. Va.; McDowell County High School, Kimball, W. Va. Present position since 1946.

*LEADIE M. CLARK. Holland Hall, A. and T. College
English

B.A., University of Illinois; M.A., University of Illinois. Former position: Clark College, Atlanta, Georgia, 1945-47. Present position since 1947.

THOMAS ARTHUR CLARKE. A. and T. College
Social Studies

B.S., City College of New York, 1936; M.S. in Education, 1945, *ibid.*; M.A., Columbia University, 1945; Recreation Director Bureau of Recreation Department of Parks, New York City, 1931-43; Marine Captain in International Transportation, Erie Railroad, 1943-45. Present position since 1945.

C. R. A. CUNNINGHAM. 1110 E. Market Street
Biology

B.S., University of Illinois, 1929; M.S., *ibid.*, 1930; Instructor, Tennessee State College, 1930-1931; Georgia Normal and Agricultural College, 1931-1934. Present position since 1934.

*Absent for further study—1950-1951.

CLARENCE E. DEAN.....Sedalia, N. C.

Agricultural Education

B.S., Hampton Institute, 1924; M.S., Iowa State College, 1930; Berry O'Kelly Training School, 1926-1930. Present position since 1930.

CARRYE V. HILL KELLEY.....141 Beech Street

English

B.S., A. and T. College; M. A., University of Pennsylvania; Further study at New York University. Present position since 1939.

AMBROSE B. LEWIS.....A. and T. College

Agriculture Engineering

B.S., Virginia State College; M.S.A., Cornell University. Former positions: Instructor, Virginia State College; Professor Lincoln University, Mo. Present position since 1950.

BERTRAM AUSTIN LEWIS.....735 Pearson Street

English

A.B., Wiley College; M.A., The University of Nebraska. Former positions: Instructor in English, Central High School, Shreveport, Louisiana, 1930-1935; Associate Professor of English, Wiley College, 1935-1943; Head of the Department of English, Washington High School, Idabel, Oklahoma, 1943-1948. Present position since 1950.

JOHN B. MURPHYA. and T. College

Agronomy

B.S., Prairie View College; M.S., Kansas State College. Instructor in Rural War Training, Prairie View College and at Nacogdoches, Texas; Teacher, Vocational Agriculture, Yoakum, Texas; County Agricultural Agent, Bellville, Austin County, Texas. Present position since 1946.

JAMES PENDERGRAST.....2601 E. Market Street

Chemistry

B.S., A. and T. College, 1939; M.S., Howard University, 1942; A. and T. College 1941-42; Southern University, 1942-45. Present position since 1945.

BERT C. PIGGOTT.....1007 Lindsay Street

Physical Education

B.S., University of Illinois; M.S., *ibid.*

CALVIN R. STEVENSON.....1103 Logan Street

Psychology and Guidance

B.S., Teachers College, Columbia University; M.A., *ibid.*; Former positions, Elementary Teacher, Baltimore, Maryland, Technical Instructor, U. S. Army, Ass't. Detach. Comd., Med. Dept. U. S. Army. Present position since 1948.

H. CLINTON TAYLOR.....807 Logan Street

Fine Arts

B.F.A., Syracuse University, 1927; M.A., Columbia University; Further Graduate study, Columbia University, 1935. Present position since 1927.

ARTHUR SYLVESTER TOTTEN.....A. and T. College Farm

Poultry

B.S., West Virginia State College; M.S., Michigan State College. Instructor poultry two years, Princess Ann College; Instructor, Southern University one year. Present position since 1946.

LLEWALLYN ADDISON WISE.....422 N. Dudley Street

Business

B.S.C., New York University, 1928; M.A., Atlanta University, 1934. Membership in: American Academy of Political and Social Science; N. C. Negro Teachers Association; Southern Business Education Association; National Business Teachers Association and National Negro Business League. Present position since 1928.

RALPH L. WOODEN.....432 N. Dudley Street

Visual Aids Education

B.S., A. and T. College; Professional Teaching Diploma, Specialist School, U. S. Army Air Forces Technical Training School; M.A., Ohio State University; Graduate work toward Ph.D., *ibid.* Former positions: Instructor, North Street High School, Hagerstown, Md., 1938-39; Dudley High School, Greensboro, N. C., 1940-41; U. S. Army Ground School Instructor, Chanute Field, Illinois, Seymour-Johnson Field, N. C., Rome Army Air Field, New York, U. S. Army, 1941-45. Present position since 1947.

THOMAS H. WRIGHT, Major, Infantry.....A. and T. College

Military Science

B.S., Education, Wilberforce University. Present position since 1949.

ASSISTANT PROFESSORS

NETTIE NASH BANKS.....420 Boyd Street

Director of Nursery School

B.S., Bennett College; M.A., Columbia University. Present position since 1946.

PEARL G. BRADLEY.....1425 E. Market Street

English and Debating

B.S., Agricultural and Technical College, 1939; M.A., University of Michigan, 1944; Instructor of English, J. B. Dudley High School. Present position since 1945.

TALMADGE BREWER.....200 Raleigh Street

Agronomy

B.S., Prairie View College, 1946; M.S., Michigan State College, 1947. Present position since 1948.

HERMAN BROWN.....1402 Washington Street

Psychology

B.S., Morgan State College; M.A., University of Michigan. Present position since 1948.

FRANCES LYDIA CARTER.....A. and T. College

Assistant Librarian

A.B., Howard University; M.S., Simmons College, Boston, Mass. Present position since 1950.

JAMES F. DAWKINS.....900 Lindsay Street

Cabinet Making

B.S., A. and T. College; M.S., University of Pennsylvania. Present position since 1948.

CHARLES C. DEAN.....144 Mitchell Street

Reference Librarian

B.S., A. and T. College; B.L.S., University of Wisconsin, 1940-41; Further study, New York University, 1946. Former position: Assistant to Registrar, A. and T. College, 1942-45. Present position since 1946.

GWENDOLYN TUBBS DICKSON.....College Campus

Commercial Education

A.B., Samuel Huston College; M.C.S., Boston University. Secretary to President, Samuel Huston College, 1939-42; Bursar-Business Manager, Samuel Huston College, 1942-45; Instructor of Commercial Education, St. Phillip's Jr. College, Summer 1946. Present position since 1946.

GEORGE C. GAIL.....812 Benbow Road

Industrial Arts

B.S., A. and T. College; M.A., University of Minnesota. Present position since 1949.

GERARD E. GRAY.....2110 McConnell Road
Architectural Engineering

B.S., A. and T. College; M.S., University of Illinois. Present position since 1950.

RUDOLPH GRANDY.....A. and T. College
Biological Sciences

B.S., A. and T. College; Cornell University, further study; Instructor in Horticulture, Southern University, Scotlandville, La. Present position since 1942.

CHARLES L. HAYES.....A. and T. College
Education

A.B., Leland College; Ed.M., Loyola University. Former positions: Assistant to Registrar, Leland College. Elementary School Teacher, Chicago Public School System. Present position since 1949.

DOLORES L. HINES.....914 Sevier Street
Physical Education

B.S., Virginia State College; M.S., University of Michigan. Former positions: Visiting Physical Education Instructor, Wilson, North Carolina Public Schools; Physical Education Instructor, Fayetteville State Teachers College, Prairie View College, Dudley High School; Health Consultant N. C. State Department of Public Instruction. Present position since 1947.

MONTICELLO J. HOWELL.....College Campus
Horticulture

B.S., Hampton Institute, 1943; M.S., Michigan State College, 1947. Former positions: Foreman in Charge, Hampton Institute greenhouses, Instructor, Agricultural Department, Bishop College, 1948. Present position since 1949.

W. MALCOLM JOHNSON, JR.....2601 E. Market Street
American History

A.B., Morgan State College; M.A., Catholic University; Former positions: Instructor for U. S. Army; High School Teacher in Maryland School System. Present position since 1948.

ROSEMARY LOUIS.....College Campus
Art

B.F.A. in Art Education, University of Illinois, B.F.A. in Painting, University of Illinois; A.M., University of Illinois. Former positions: Lane College, 1942-43. Dunbar Recreation Association, Incorporated, 1943-44, Morris-Brown College, 1944-48. Present position since 1949.

CLEO MILAN MCCOY.....115 Obermeyer Street
Religious Education

B.A., Paine College, 1939; B.D., School of Religion, Howard University, 1942. Interne Chaplain, National Training School for Boys, Washington, D. C., 1940; Qualifications Examiner, United States Civil Service Commission, Washington, D.C., 1943-45; Personal Technician, Treasury Department, Bureau of the Public Debt, New York Regional Office, New York City, 1946. Present position since 1946.

DORSEY L. MORGAN.....College Campus
Physics

B.S., Howard University; M.S., University of Chicago. Former positions: Assistant Physicist, Ft. Monmouth, N. J. for U. S. War Department, 1942-47; Instructor in Physics, Southern University, Baton Rouge, La., 1947-49. Present position since 1949.

PERCY MCWAIN.....731 Julian Street
Chemistry

A.B., Ohio State University; M.A., *ibid.*; Former position: Atmospheric Nitrogen Corp., Ironton, Ohio; Research Assitant, Ohio State University Research Foundation. Present position since 1948.

ALMA I. MORROW.....1001 Lindsay Street
Librarian

B.S. in Library Science, Hampton Institute; A.B., Howard University; Graduate Study, Columbia University. Present position since 1936.

RAYMOND A. MONTGOMERY, Major, Infantry.....A. and T. College
Military Science

LOUISE PHELPS A. and T. College
Mathematics

B.S., Morgan State College; M.S., Howard University; Further Study New York University. Present position since 1950.

KATRINA M. PORCHER.....College Campus
Home Economics

B.S., Hampton Institute, 1941; Montclair, N. J. State Teachers College, summer; M.A., Columbia University, 1946. Former position: Holloway High School, Murfreesboro, Tenn., Williston Industrial School, Wilmington, N. C. Present position since 1947.

CHARLES M. POWELL.....1012 Benbow Road
Industrial Education

B.S., A. and T. College; M.A., New York University; Former positions: Instructor of Industrial Arts at Whiteville High School, Statistician at Harlem Y.M.C.A., New York; U. S. Army Section Construction Foreman. Present position since 1948.

GLEN F. RANKIN.....803 Julian Street
Agricultural Education

B.S., A. and T. College; M.S., Pennsylvania State College. Former positions: Teacher of Vocational Agriculture, Aggrey Memorial High School, Rowan County; Assistant Supervisor of the Veterans Farmer Training Program, 1947-1948. Present position since 1950.

*JAMES HOLT REEVES, JR.....416 Beech Street
Sociology

B.S., A. and T. College; Master of Arts, Boston University. Former positions, A. and T. College, April-June, 1946. Present position since 1947.

*ARMAND RICHARDSON.....421 Bennett Street
Electrical Engineering

B.S., E.E., University of Pittsburgh. Present position since 1947.

WILLIAM T. RICHIE.....422 Gorrell Street
Poultry Husbandry

B.S. A., Georgia State College; M. S., Ohio State University. Former position: Teacher of Poultry Husbandry, West Virginia State College, 1948-49. Present position since 1949.

*BROADUS E. SAWYER.....A. and T. College
Business Administration

B.S., A. and T. College. M.B.A., University of Pennsylvania. Former position: Teacher at A. and T. College Spring and Summer of 1946. Present position since 1948.

BOOKER TALLIFERRO SIMPSON.....1313 Gorrell Street
Chemistry

B.S., Claflin College; M.S., State University of Iowa; Former positions: Teacher of Chemistry and Mathematics, High School, Anderson, South Carolina, 1935-39; Teacher of Chemistry and Mathematics, Lancaster, South Carolina, 1942; Teacher of Mathematics, Hampton, Virginia (High School) 1942. Present position since 1948.

*Absent for further study 1950-51.

WILLIAM SPIGENER.....2601 E. Market Street

Biology

B.S., Lincoln University; M.S., Catholic University of America. Statistician, War Department. Present position since 1946.

JOSEPH L. STEPHENSON, Captain, Infantry.....A. and T. College

Military Science

B.S., A. and T. College.

VEDA J. STROUD.....1425 East Market Street

Business Administration

B.S., A. and T. College; Secretary to the Dean of the School of Education and Sciences, A. and T. College, 1939-1940; M. A., Columbia University, 1947. Present position since 1942.

RICHARD ARTHUR THORNHILL.....A. and T. College Campus

Zoology

B.S., Virginia Union University; A.M., Montclair, N. J., State Teachers College. Principal, Oak Hill High School, Virginia; Instructor Trainer, U. S. Army. Present position since 1946.

*ALFRED C. TYLER.....1709 Lindsay Street

Radio Servicing

B.A., Morehouse, 1932; M.A., Columbia University, 1941; Certificate of Proficiency in Television, Technical School, Temple University. Instructor in Algebra and Physics, Sterling High School, 1933-40; Principal, Sterling High School, Sheffield, Ala., 1940-43.

H. E. WEBB, JR.....2601 E. Market Street

Electrical Engineering

B.S., Electrical Engineering, A. and T. College. M.S., New York University. Present position since 1947.

HOWARD C. WILLIAMS.....A. and T. College

Rural Sociology and Economics

B.S.A., Georgia State College; M.S., Ohio State University. Present position since 1947.

CHARLES RUSSELL WYRICK.....1606 East Market Street

English

B.S., A. and T. College; M.A., New York University; Former positions, Instructor Ammunition School, Aberdeen, Maryland. Present position since 1948. B.S., A. and T. College. Night class instructor at Wm. Penn High School, High Point, N. C., 1946-47. Present position since 1947.

INSTRUCTORS

HARVEY R. ALEXANDER.....2601 East Market Street

Accounting

B.S., University of Illinois, 1947; M.S., Duquesne University, 1950. Former position: Instructor of Accounting, Southern University, Baton Rouge, Louisiana. Present position since 1950.

ISAAC BARNETT.....A. and T. College

Automobile Mechanics

DURWARD C. ARCHER.....A. and T. College

Physics

B.S.M.E., Howard University. Present position since 1950.

*Absent for further study 1950-1951.

- LEO GABRIEL BAKER.....A. and T. College
Masonry
 B.S., A. and T. College; M.A., New York University. Present position since 1950.
- ISAAC BANKS.....114 Laurel Street
Mathematics
 B.S., A. and T. College. Present position since 1950.
- LEWIS E. BARBEE.....409 North Dudley Street
Agronomy
 B.S., Virginia State College, 1948; M.S., Purdue University, 1950. Present position since 1950.
- HARRIETTE LEE BELL.....A. and T. College
English
 B.S., Miner Teachers College; Further study, Ohio State University. Former positions: Instructor Florida A. and M. College, Teacher Washington, D. C. Public Schools. Present position since 1950.
- ARTHUR L. BOWMAN.....A. and T. College
Electrical Engineering
 B.S.E.E., Howard University, 1950. Present position since 1950.
- MATTHEW BROWN.....A. and T. College
Physical Education
 Attended Ohio State University. Present position since 1948.
- NATHAN E. BROWN.....815 English Street
Carpentry
 B.S., A. and T. College. High School Vocational teacher for 6 years. Present position since 1947.
- WENDELL M. BRYANT.....809 E. Bragg Street
English
 B.S., Journalism, University of Kansas. Former position, Telegraph Editor of the "Kansan" and feature writer of the "Daily World" in Lawrence, Kansas. Present position since 1948.
- *DOROTHY B. SIMMONS CAMERON.....906 Julian Street
Secretarial Science
 B.S., A. and T. College. Present position since 1948.
- G. L. BURGE.....1719 McConnell Road
Bricklaying
- C. L. CANNON.....1402 McCornell Street
Laundry Management
 B.S., Alcorn A. & M. College. Present position since 1946.
- WALTER F. CARLSON, JR.....1501 Lindsay Street
Band Music
 B.S., A. and T. College; further study, University of Michigan. Present position since 1946.
- ETHBERT S. CARR.....1527 McConnell Road
Agronomy
 Hampton Institute; B.S. in Agriculture, Ohio State. Instructor at Prairie View State College. Present position since 1945.

*On leave of absence—1950-1951.

ELIZABETH W. CLARK.....2601 East Market Street

Biological Science

B.S., A. and T. College, attended City College of N. Y., Hunter College, N. Y.; Former position: Medical Pathological Technician, Harlem Hospital, N. Y.; Playground Director, New York City. Present position since 1948.

SYLVESTER L. CLARKE.....2601 East Market Street

English

A.B., Shaw University; Further study, Cornell University. Former positions: Instructor in the Beaufort County System. Present position since 1950.

WILHELMINA W. COLSTON.....A. and T. College

History

A.B., Talladega College; M.A., Howard University; Further study, New York University. Former positions: Instructor Ballard School, Macon, Ga., Instructor Bethune-Cookman College, Daytona Beach, Fla. Present position since 1950.

MARQUIS L. COUSINS.....409 N. Dudley Street

Automobile Mechanics

Certificate of Auto Mechanics, A. and T. College. Instructor of auto, mech. in U. S. Army for 2 years. One year at General Motors School, Detroit, Mich.; Present position since 1947.

ANN LAMB DAVIS.....1103 Benbow Road

Clothing

B.S., A. and T. College, 1943; A.M., Columbia University, 1944. Former positions: Clothing Instructor, Dudley High School, Greensboro, N. C.; North Carolina College, Durham, N. C. Present position since 1949.

CHARLES C. DAVIS.....A. and T. College

Mathematics

B.S.-E.E., Howard University. Present position since 1946.

CLYDE DEHUGULEY.....360 West Bragg Street

Shoe Repairing, Leather Works

Graduate Tuskegee Institute, 1922; Instructor in shoe repairing, Kentucky State College, 1922-24. Present position since 1924.

ORAN KAY DORSETT.....219 Gant Street

Tailoring

Certificate, A. and T. College, 1947. Present position since 1947.

HENRY NATHANIEL DREWRY.....College Campus

History

A.B., Talladega College; M.A., Columbia University. Present position since 1949.

LEOPHAS FORD.....A. and T. College

Chemistry

B.S., A. and T. College. Present position since 1950.

WILLIAM H. FOUST.....119 Landreth Street

Bricklaying, Cement Construction

Attended Trade School, A. and T. College, 1931; General Contractor, 1936-41; Foreman of Walk's Real Estate Company, Washington, D. C., 1941-42; Worked on Defense Projects. Present position since 1944.

JAMES G. FRENCH.....A. and T. College

Radio

B.S.-E.E., University of Pittsburgh, 1950. Present position since 1950.

- WILLIAM L. FULP.....A. and T. College
Mathematics
 B.S., A. and T. College; Former positions: Delwatt's Radio and Electrical Institute; Russell's Commercial School. Present position since 1950.
- WILLIAM H. GAMBLE.....2601 E. Market Street
Education
 B.S., A. and T. College, 1938; Further study, University of Pittsburgh and Columbia University. Assistant to the Registrar, A. and T. College, 1938-40; Dean of Men and Instructor of Education. Present position since 1940.
- ELIZABETH B. GADDY.....523 Bennett Street
Commercial Education
 B.S., A. and T. College. Present position since 1950.
- LORRAINE A. GAIL.....2601 East Market Street
English
 A.B., Morgan State College. Present position since 1950.
- HUBERT S. GASKIN, 1st Lt., Infantry.....A. and T. College
Military Science
 A. and T. College, three years of study.
- LEROY F. HARRIS.....1007 Lindsay St.
Sociology
 B.A., Morehouse College; further graduate study University of Wisconsin. Former positions: Head Coach, Alcorn College and Tougaloo College. Present position since 1949.
- BETTE H. HAYES.....A. and T. College
Psychology
 Ph.B., Loyola University. Present position since 1950.
- ANNIE BEATRICE HERBIN.....A. and T. College
Freshman English
 B.S., A. and T. College. Present position since 1949.
- HERBERT M. HEUGHAN.....200 Raleigh Street
Mathematics
 B. S., Hampton Institute; Further study, University of Maine; Former positions: Hampton Institute, M.N.S. High School, Accomac, Virginia, Extension Teacher, Virginia State College. Present position since 1948.
- MAJOR B. HOLLOWAY.....1145 Gorrell Street
Auto Mechanics
 Certificate, A. and T. College, 1940; Instructor Mechanics School United States Army 1941-45. Present position since 1945.
- BEN EDWARD HOLT.....415 Dudley Street
English
 B.A., Howard University; M. A., New York University. Present position since 1950.
- V. ANTHONY HORNE, JR.....A. and T. College
History
 A. B., Tougaloo College, 1948; M.S.E., University of Notre Dame, 1950. Present position since 1950.
- FLORENCE B. IRVING.....A. and T. College
Business Administration
 A.B., Spelman; M.B.A., University of Chicago. Present position since 1949.

- JAMES JENKINS, JR.....A. and T. College
Carpentry
 B.S., Hampton Institute. Present position since 1950.
- GARDENIA JOHNSON.....116 Daniel Street
Physical Education
 B.S., A. and T. College. Present position since 1948.
- *RICHARD L. JOHNSON.....912 High Street
Mathematics
 Lutheran College, 1939-41; B.S. in Mech. Engr., A. and T. College. Further study Armed Forces University of the Pacific, Okinawa, 1945-46. Present position since 1948.
- WILLIAM N. JOLLY, JR.....A. and T. College
Electrical Engineering
 B.S.E.E., Howard University, 1950. Present position since 1950.
- *CLINTON E. JONES.....432 N. Dudley Street
Mathematics
 B.S., A. and T. College, further graduate study, University of Michigan. Former positions: A. and T. College, 1943, Hampton Institute, 1944; A. and T. College, 1946. Present position since 1946.
- JEANETTE JONES.....A. and T. College
Nursery School
 B.S., A. and T. College. Present position since 1950.
- WENDELL P. JONES.....1101 East Market Street
Mathematics
 B.S., A. and T. College; M.S., State University of Iowa. Present position since 1950.
- DAISYBELLE JONES.....1119 Benbow Road
English
 A.B., Virginia State College; M.S.W., Atlanta University; Teacher, public schools, Lynchburg, Va. Present position since 1947.
- *THOMAS B. JONES.....Campus
Mechanical Drawing
 B.S., A. and T. College.
- *PAUL E. LEACRAFT.....106 Shaw Street
Mathematics
 B.S., A. and T. College, 1941; High School Instructor, 1941-42; 1st Lt. C.W.S. Present position since 1946.
- HARDY LISTON, JR.....330 West Bragg Street
Mechanical Engineering
 Knoxville College, 1936-39; B.S. in M.E., 1943, Howard University; Assistant Ordnance Engineer, Navy Department, Washington, D. C., 1943-46. Present position since 1946.
- JAMES A. LONG.....A. and T. College
English
 B.S., A. and T. College. Present position since 1950.

*Absent for further study 1950-1951.

- LORENO MEBANE MARROW.....A. and T. College
English
 B.S., A. and T. College. Further study New York University. Present position since 1948.
- EDDYE MCCARTY.....A. and T. College
Textile and Clothing
 B.S., Southern University; M. S., Iowa State College. Present position since 1950.
- JOSEPH H. MEYERS.....315 Spring Street
Plumbing
- *WALLACE L. MITCHELL.....422 N. Dudley Street
Carpentry
 B.S., Shaw University, 1931; B. S., A. and T. College, 1935. Present position since 1935.
- CALVIN F. MORROW.....709 Julian Street
Shoe Repairing
 B.S., A. and T. College. Present position since 1950.
- EDWINA T. MURPHY.....501 Bennett Street
English-Spanish
 A.B., Fisk University; Further study, Columbia University. Anderson High School, Austin, Texas; Tollostson College, Austin, Texas; Summer High School, Kansas City, Kansas. Present position since 1946.
- MURRAY L. NEELY.....A. and T. College
Physical Education
 B.S., Florida A. and M. College. Former positions: Instructor, Jones High School, Orlando, Florida; Instructor Industrial High School, West Palm Beach, Florida 1941-43-1946-1950; Assistant Coach, Florida A. and M. College, 1945-1946. Present position since 1950.
- *LOUISE M. E. NIXON.....A. and T. College
Mathematics
 B.S., A. and T. College. Math. and Science Teacher, Willis Hare High School, Pendleton, N. C.; Math. teacher, Dudley High School, Greensboro. Present position since 1947.
- JAMES THOMAS NORRIS, JR.....809 King Street
Automobile Mechanics
 Certificate, A. and T. College. Teaching night school at Wm. Penn High School, High Point. Present position since 1947.
- ALONZO MELTON PEGGINS.....College Campus
Freshman Mathematics
 B.S., A. and T. College. Present position since 1949.
- ROBERT S. POOLE.....College Campus
Tailoring and Designing
 Hampton Institute, 1911; Mitchell School of Designing, 1916; Instructor, Edward Waters Institution, 1917-1920. Business, 1920-1926. Further study in dry cleaning, Hampton Institute Summer 1940. Present position since 1926.
- ANITA MEARES RIVERS.....301 Beech Street
Mathematics
 B.S., Hampton Institute; M.A., University of Michigan. Former positions: Public Schools: Williamsburg, Va., 1933-1936; Maryland, 1936-37; Greensboro, N. C., 1938-41; State Teachers College, Elizabeth City, 1942-1943; A. and T. College, 1944-1945; Bennett College, 1945-1950. Present position since 1950.

*Leave of Absence.

HAROLD ARTHUR ROBERTS.....A. and T. College
B.E.E. University of Minnesota, Institute of Technology. Present position since 1950.

CLEMMENT B. SMITH.....A. and T. College

Dry Cleaning

National Association of Dry Cleaning Institute. Present position since 1949.

DAVID G. SPELLER.....213 Marshall Street

Tailoring

Certificate, A. and T. College, 1936; Business, 1938-1939; Religious Director, Hayes-Taylor Memorial Y.M.C.A., Greensboro, N. C., 1939-1941; Acting Pastor New Zion Baptist Church, Greensboro, N. C., 1941; Assistant Pastor, Ebenezer Baptist Church, Portsmouth, Va., Summer, 1942; Acting Pastor, First Congregational Church, Greensboro, N. C., 1943; Assistant Instructor in Tailoring, A. and T. College since 1940. Present position since 1941.

YVONNE SIMMONS.....906 Julian Street

Mathematics

B.S., A. and T. College. Present position since 1950.

*VIRGIL C. STROUD.....1425 East Market Street

History

B.S., A. and T. College; Graduate study, *ibid.*; Former positions: Instructor, Florence High Point, High Point, North Carolina, V.A. appraiser, A. and T. College Veterans Guidance Center. Present position since 1947.

CHARLES L. SWINSON.....439 North Dudley Street

Tailoring

Certificate in Tailoring, A. and T. College. Further study, A. and T. College. Present position since 1947.

VERDELLE L. VINSCON.....A. and T. College

Music

B.S., Kansas State Teachers College; A.M., Teachers College, Columbia University. Former position: Instructor of Music, Oklahoma Public Schools. Present position since 1949.

LATHAM WALLACE.....122 Regan Street

Shoe Repairing

Certificate, A. and T. College, 1946; B.S., A. and T. College, 1947. Present position since 1947.

J. E. WILKINS.....Campus

Bricklaying

ANDREW W. WILLIAMS.....A. and T. College Campus

Machine Shop Practice

Certificate Machinist Trade School, Chicago, 1943; A. and T. College, 1946. Instructor in Machine Shop Practice, U. S. Navy, 1943-45; Industry, 1943. Present position since 1946.

GEORGE E. WILLIAMS.....200 Raleigh Street

Fine Arts

B.F.A., University of Denver. Present position since 1948.

RAYMOND P. WILLIAMS.....1204 Kivett Drive, High Point, N. C.

Welding

1940-41, A. and T. College Vocational School of Carpentry; 1943, Washington State Vocational School of Welding, Certified by "American Bureau of Shipping Surveyor," 1943. Head of Industrial Arts, 229 CCC Fort Bragg, N. C., 1935-36; Instructor of Industrial Arts, Palmer Memorial Institute, 1937-38; Recreational Leader in Greensboro, High Point, Burlington and Sedalia, N. C., 1938-40; National Defense Work during War, Philadelphia Navy Yard, Philadelphia, Pa. Present position since 1945.

*Absent for further study

STATE AGRICULTURAL EXTENSION SERVICE PERSONNEL

R. E. JONES, B.S., M.S.....	<i>State Extension Agent</i>
J. W. JEFFRIES, B.S.....	<i>Assistant State Extension Agent</i>
M. R. ZACHARY, B.S.....	<i>District Farm Agent</i>
JOHN A. SPAULDING, B.S.A.....	<i>District Farm Agent</i>
MRS. DAZELLE F. LOWE, B.S.....	<i>District Home Agent</i>
MISS WILHELMINA R. LAWS, B.S.....	<i>District Home Agent</i>
MRS. RUBY C. CARRAWAY, B.S.....	<i>District Home Agent</i>
WILLIAM C. COOPER, B.S.....	<i>State 4-H Club-Specialist</i>
MISS IDELL JONES, B.S.....	<i>Assistant 4-H Club Specialist</i>
ROBERT LOUIS WYNN, B.S., M.S.....	<i>Extension Dairy Specialist</i>
MISS GENEVIEVE M. KYER, B.S., M.S.....	<i>Subject Matter Specialist, Clothing and Home Management</i>
MRS. BESSIE B. RAMSEUR, B.S., M.A.....	<i>Subject Matter Specialist Foods and Nutrition</i>
MISS H. BLANCHE STEPHENS, Diploma.....	<i>Secretary to State Agent</i>
MRS. HAZEL R. MITCHELL, Certificate.....	<i>Secretary to Extension Supervisors (Men)</i>
MRS. FRANCES H. OVERBY, B.S.....	<i>Secretary to District Supervisors (Women)</i>
S. J. HODGES, B.S.....	<i>Extension Agronomy Specialist</i>
MISS MYRTLE E. OLIVER SMITH, B.S.....	<i>Secretary to Extension Specialists (Women)</i>
MISS RUBY JOAN WILLIAMS, B.S.....	<i>Secretary to Extension Specialists (Men)</i>
MRS. ROSA T. WINCHESTER, B.S.....	<i>Home Agent, Guilford County</i>
B. A. HALL, B.S.....	<i>County Agent, Guilford County</i>

HISTORY OF THE COLLEGE

The College was established as the "A. and M. College for the Colored Race" by an act of the General Assembly of North Carolina, ratified March 9, 1891. The object of the institution is declared by the act to be for the instruction in practical agriculture, the mechanic arts and such branches of learning as related thereto, not excluding academic and classical instruction.

By an act of the state legislature in 1915 the name of the college was changed to The Agricultural and Technical College of North Carolina. In 1939, the legislature authorized the College to grant the Master of Science degree in certain fields and to negotiate out of state aid scholarships to students desiring graduate work in fields not now obtainable at A. and T. College, but offered at the University of North Carolina.

The citizens of Greensboro donated fourteen acres of land and \$11,000 to be used in the construction of buildings. In 1893 this was supplemented by an appropriation of \$10,000 by the General Assembly. Dudley Hall was completed in 1893 and the school opened in the fall of that year at Greensboro. Previously, it had operated in connection with Shaw University in Raleigh, N. C.

The management and control of the College and the care and preservation of all its property are vested in a Board of Trustees, consisting of sixteen members, who are elected by the General Assembly, or appointed by the Governor, for a term of six years.

The Trustees, by the act of the Legislature, have power to prescribe rules for the operation of the College; to elect the president, instructors, and as many other officers and assistants as they shall deem necessary; and have general and entire supervision of the establishment and maintenance of the College.

The financial support of the College for the payment of salaries and purchase of apparatus and equipment is derived from the United States, under an Act of Congress known as the Morrill Act, passed August 20, 1890. This act makes an annual appropriation for each State and Territory for the endowment and support of colleges for the benefit of agriculture and mechanic arts, to be applied "only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematics, physical, natural, and economic sciences with special reference to their application in the industries of life and the facilities of their instruction."

The College also receives an appropriation from the State for general maintenance, which cannot be provided for under the laws governing the use of Federal appropriations.

The College holds institutional membership in the Association of Colleges and Secondary Schools, Association of American Colleges, The

American Council on Education, The Association of Land-Grant Colleges and the North Carolina College Conference. It is on the approved list of the American Medical Association, and the Southern Association of Colleges and Secondary Schools.

The work of the College is carried on through six major divisions or schools. These are the School of Agriculture, the School of Education and Science, the School of Mechanic Arts, the Trade School, the Summer School, and the Graduate School.

The offerings, requirements and objectives of these schools are explained in the pages that follow. Special bulletins on the Trade School, the Graduate School, and the Summer School are published by the College. A copy of either may be had on request.

THE COLLEGE BUILDINGS

DUDLEY MEMORIAL BUILDING

On January 27, 1930, the original Dudley Hall was destroyed by fire. The erection of the New Dudley Hall was undertaken immediately thereafter and on February 15, 1931, it was occupied. This is a fine fire-proof structure of three stories, larger than the old building and better suited to meet the needs of a modern college. It contains classrooms, assembly rooms, library, offices for the President, Dean of the School of Education and Sciences, Treasurer, Registrar, Bursar, and other administrative officers.

LIBRARY

The Library occupies the entire second floor of the Dudley Administration Building. It contains 39,871 volumes, 4,800 pamphlets, receives 201 current periodicals, representing various departments of the College, and 23 newspapers. Books have been carefully selected with a view to facilitating instruction and research.

All students registered in the College are entitled to full reference use of the Library. Subject to certain necessary library rules and regulations, students may withdraw books for home use. The Bursar's receipt, bearing the signature of the student, must be presented as identification.

Library Hours: The Library is open Monday through Friday from 8:00 a.m. to 5:00 p.m. and 6:30 to 9:00 p.m. except Saturday when the hours are from 9:00 a.m. to 12 noon and 1:30 to 4:30 p.m.

NORTH DORMITORY

The North Dormitory is a three-story building which contains rooms for about 70 students.

MORRISON HALL

Morrison Hall is a fireproof, three-story building with basement. It contains rooms for 130 students.

ANNIE W. HOLLAND HALL

Annie W. Holland Hall is a dormitory for women. It was completed in 1938 and is named in honor of Mrs. Annie W. Holland, who for a long period was State Supervisor of Colored Elementary Schools in North Carolina. The building is fireproof and is located in one of the most beautiful sections of the campus. It is constructed to house 155 students.

THE COLLEGE BUILDINGS RENAMED

By a special vote of the Board of Trustees in its annual meeting for 1933, the following changes in the names of buildings were made: the Agricultural Building became Noble Hall in recognition of the distinguished services of the late Chairman of the Board of Trustees, Dr. M. C. S. Noble, and the Mechanics Building became Crosby Hall in honor of the first president of the College, Dr. John O. Crosby.

VANSTORY HALL

Vanstory Hall, formerly known as the South Dormitory, is a three-story, brick building, which contains rooms for 92 students. The basement is used for offices for physical education department.

NOBLE HALL

Noble Hall is a fireproof, three-story structure, with basement. It contains laboratories for botany, dairy products, zoology, and geology. Classrooms and offices for the Dean, School of Agriculture, and the heads of divisions are provided.

CROSBY HALL

Crosby Hall, one of the few remaining historic buildings on the campus, is a three-story structure. It houses on the ground floor auto mechanics shops, maintenance and the College Post Office. The first floor contains bookstore, Dressmaking, and the R.O.T.C. Storeroom. The third floor houses the Departments of Fine Arts.

NEW TRADES BUILDING

A new trades building, now under construction on the college campus, is scheduled to be completed in the Fall of 1951. It is to be a modern fire proof structure which will provide 52,260 square feet of floor space in which the following trades will be taught:

Auto Mechanics, Cabinet Making, Carpentry, Ceramics, Drafting, Electric Wiring, Machine Shop, Masonry, Photography, Plumbing, Radio and Television Servicing, Refrigeration, Sheet Metal, Shoe Repairing, Tailoring, Welding, Painting and Decorating.

ALEXANDER GRAHAM HALL

The Alexander Graham Hall is a three-story fireproof structure located near U. S. Highway No. 70. The building was constructed in 1939 with funds appropriated by the State and the Federal Emergency Administration of Public Works and contains the following laboratories and shops: Physics, Photography and Visual Education, and Engineering, Laboratories, Industrial Arts, Auto-Mechanics, Shoe Repairing, Machine Shop and Welding. The office of the Dean of the School of Mechanic Arts is also located in this building.

RICHARD B. HARRISON AUDITORIUM

The Richard B. Harrison Auditorium, completed in 1940, is named in honor of the noted actor and teacher who gained world renown as "De Lawd" in the great stage production of 1930, *The Green Pastures*. Previously Richard B. Harrison had been well and favorably known to the students and constituents of the A. and T. College as a teacher of dramatics and public speaking, a position he had held at the College for a number of years and relinquished to accept the part in the play mentioned above.

This auditorium, one of the largest and best equipped of its kind in the State, contains in addition to the main assembly room, special rooms for dramatics, band and music classes, and offices for the music and dramatic departments. It is the center for public programs, religious services and extracurricular activities.

THE COLLEGE GYMNASIUM

The College Gymnasium is a one-story fireproof structure located on East Market Street, which is United States Highway No. 70, the main thoroughfare connecting eastern and western Carolina. This building is used for physical education classes and extracurricular activities for both men and women. The large seating space and the stage make it possible for this building to be used also as an auditorium for public programs and other civic activities.

MURPHY HALL

Murphy Hall is a one-story fireproof building which contains the cafeteria, the kitchen, and the refrigeration plant. The cafeteria has seating capacity for 800 students. It is one of the most beautiful buildings of its kind to be found in the State.

FLORENCE GARRETT PRACTICE HOUSE

The Florence Garrett House is the new home economics practice house. The building was named in honor of Mrs. Florence Garrett who was among the first women students to attend the College, and who bequeathed her small estate to the College as a beginning of an endowment. The Practice House is a two-story brick structure, conveniently located and adequately constructed to meet the needs of the home economics students.

POWER PLANT

A new central heating and power plant has recently been installed containing boiler capacity of 330 horsepower and affords the students of mechanical engineering the opportunity of practical experience in boiler-room operation and management. Attached to the power plant is a modern steam laundry containing modern equipment.

NOTE: Other equipment and buildings are described in special sections dealing with the Schools of Agriculture.

NORTH CAMPUS

In the fall of 1946, the College was successful in purchasing the military hospital area of the local army overseas Replacement Depot. This plot comprises about fifty-two acres of improved land and is one block north of the main campus.

This new area has been designated the North Campus. Some of the buildings are being used for dormitories for men, some for class rooms, and others for shops for trade and vocational classes. Physical Education classes for men are held in the recreation hall, and other classes are conducted in various buildings.

The army administration headquarters have been converted into offices for the Veterans Administration Guidance Center and for the college guidance center.

TEMPORARY HOUSING

In 1946, the College was allotted seventy-two temporary housing units for the accommodation of married veterans. These units have been erected and are now occupied by married veterans enrolled at the college.

A dormitory containing space for one hundred and twenty-eight single veterans has also been allotted by the federal housing authority.

GENERAL INFORMATION

ADMISSION TO COLLEGE

High school graduates may qualify for admission by any one of the following methods:

1. Examination conducted by the College Entrance Board.
2. Certificate from an accredited high school.

Students who desire admission to the Freshman Class by certificate must show that they have completed sixteen (16) units of high school work as follows:

Six units required from Group I.

As many as ten units may be elected from Group II.

As many as six units may be elected from Group III.

Group I		Required Units	Group II Units	Electives
1. English	3	1. Science (Natural)		
2. Mathematics	2	2. Social Science		
3. Social Science	1	3. English		
		4. Mathematics		
		Group III		
		1. Agriculture	Electives	
		2. Art		
		3. Commercial Subjects		
		4. Home Economics		
		5. Industrial Arts		
		6. Music		
		7. Mechanics		
		8. Foreign Language		

NOTE: Not more than three units from any subject in Group II and two units from any subject in Group III will be accepted in the fifteen (15) units of work.

A unit of work in the above requirements is approximately a fourth of a year's work in a secondary school. It is assumed that study is pursued for four or five periods a week, that the recitation periods are from forty to sixty minutes in length, and that the length of the school year is nine months.

FRESHMAN WEEK

1. Each candidate for the freshman class, who is not a resident of Greensboro, is expected to arrive on the campus the day preceding the date designated on the College Calendar for Freshman Orientation. All freshmen should be present by 8:00 a.m. on the first day.

2. The "permit to register" furnished beforehand by the Registrar, indicating the School or Department in which the applicant wishes to register must be ready for presentation to proper authorities.

3. The dates indicated in the College Calendar for freshman orientation and registration as well as those for upperclassmen must be strictly observed. For those seeking registration after the scheduled date, an extra fee of \$2.00 is charged for the first day and \$1.00 for each additional until a maximum of \$5.00 is reached.

4. Admission to class will be permitted only after registration has been completed and certified on the official card of the Bursar.

CLASSIFICATION OF NEW STUDENTS

1. *Freshmen.*

a. Graduates from high schools will receive entrance ratings according to the standing of their respective schools.

b. If the student is not a graduate of an accredited high school, he must comply with the requirements by examination. Entrance examinations will be held at the College on September 14, 1951.

c. Every student, irrespective of the method by which he seeks admission, must present to the College through the principal of his former school, a transcript covering his entire record of subjects and grades and a statement including the principal's estimate of his character.

NOTE: All entering freshmen will be required to take placement tests in English and mathematics. Students registering in the School of Education and Sciences will take placement tests in French if they have two units of French on their high school transcripts. All who fail in the English examination will be assigned to a remedial course in English (English 210). All who fail in the mathematics examination will be assigned to a remedial course in mathematics (Mathematics 309). All who fail in the French test will take French 211.

2. *Students of Advanced Standing.*

After transcripts have been received, applications for advanced standing will be passed upon by the admission officer, and students will be furnished a statement of credit allowed.

All persons who desire to enter the College should make application to the Registrar before the opening of the quarter for which they wish to enroll. Those who desire to be admitted by certificate should apply as soon as possible after graduation from high school. For all applicants the blank form found in the back of the catalogue is sufficient. Early attention to this matter will save the student delay at the opening of the session.

3. *Special Students.*

In exceptional cases applicants of mature years, of special training along particular lines, or of long experience in specific fields of knowl-

edge, may be admitted to the College to study certain subjects, as special students, even though they cannot satisfy entrance requirements. Such students must do a passing grade of work in each course for which they may be permitted to register, or they will be asked to withdraw from the course.

CLASSIFICATION OF ADVANCED STUDENTS

Sophomore—

To be classified as a sophomore a student must have completed fifty hours of work open to freshmen with at least fifty grade points. As a part or in addition to this, the freshman courses in education, vocations, military science or physical education, and remedial English and mathematics must be completed.

Junior—

Before being classified as a junior a student must have completed one hundred quarter hours of work required of sophomores with a similar number of grade points. No student will receive junior classification until all required freshman and sophomore courses have been completed.

Senior—

Before gaining senior classification a student must have completed at least one hundred and fifty hours of required and major work with a minimum of one hundred and fifty grade points.

STUDENT LOAD

The unit of credit is the quarter hour. It stands for one recitation or two laboratory periods per week for a period of twelve weeks. Each recitation period requires approximately two hours of preparation.

Students will generally be required to register for a minimum of 14 hours of regular work of college credit per quarter.

(a) Students whose general average is "C" may register for not more than minimum of the curriculum.

(b) Students whose average is 2.5 grade points, with no grade below "B" may be permitted to register for not more than 21 hours of work for the quarter following such a record.

Students carrying a normal load in regular classes will not be permitted to register for credit in evening or extension classes.

MARKING SYSTEM

	<i>Grade Points</i>
93-100—A (Excellent)	3
82- 92—B (Good)	2
71- 81—C (Fair)	1
60- 70—D (Poor, but passing)	0
Below 60—F (Failure)	—1
I (Incomplete)	
W.P. (Withdrew passing)	
W.F. (Withdrew, failing)	

GRADE POINTS

The maximum points which a candidate for graduation with minimum hour requirements can make under this system will be 600, the minimum 200; this means that, in order to graduate a student must make an average of "C."

REMOVAL OF FAILURES

At his first opportunity a student must repeat in class a required course in which he has failed, unless the Dean of his School authorizes a suitable substitute course.

INCOMPLETES

Students are expected to complete all requirements of their courses during the quarter in which they are registered. However, if at the end of the quarter, a small portion of the work remains unfinished that can be completed without further class attendance, the grade for the student may be reported "Incomplete," providing his standing in the course is of passing quality.

To secure credit the work must be completed within one month after the beginning of the succeeding quarter in residence, otherwise, the grade automatically becomes "F."

At the close of the quarter, each teacher shall file with the Registrar a list of names of students who have received "Incomplete" grades together with a statement of all the work required to complete the course before a final grade can be reported to the Registrar.

After registration has been completed in the following quarter and it has been determined that a student has registered, both he and the teacher shall be notified by the Registrar of the outstanding "Incomplete" grade and that it must be removed within the prescribed period.

COURSE NUMBERING SYSTEM

The instruction of the College is administered by five main groups:

- The Faculty of the Graduate School.
- The Faculty of the School of Agriculture.
- The Faculty of the School of Education and Sciences.
- The Faculty of the School of Mechanic Arts.
- The Faculty of the Vocation School.

The number of each course in the Agricultural School begins with the figure 1; those in the School of Education and Sciences, with the figure 2; those in the Mechanic Arts School, with the figure 3, and those in the Vocational School, with 4.

Each course is designated by a number containing three figures. The first indicates the school in which it is offered; the second (with a few

exceptions), its academic classification; and the third, either the quarter in which it is usually given or its serial number.

Examples:

History 211 is a course offered by the Faculty of the School of Education and Sciences; it is open to freshmen, and is usually offered in the first quarter (Fall Quarter).

Chemistry 111 is a course offered by the Faculty of the School of Agriculture; it is open to freshmen, and it is the first of a series.

Physics 323 is a course offered by the Faculty of the School of Mechanic Arts; it is open to Sophomores, and it is usually given in the third quarter (Spring Quarter).

Exceptions:

(a) There are some unavoidable exceptions to this system, especially with reference to the second and third figures. Some courses with the middle figure 1 are open to upperclassmen, and there are a few courses with the middle figure 2 open to freshmen. Courses are not in every case given during the quarter indicated by the third figure (where the third figure is meant to indicate the quarter rather than the serial number).

(b) Courses in all schools open to advanced undergraduates and graduates are numbered 500 plus; strictly graduate courses are numbered 600 plus.

(c) Courses in the Vocational School are numbered 400 plus.

SCHEDULE REGULATIONS

EXAMINATIONS

Entrance examinations and examinations for removal of conditions will be held September 14. All students who have to remove conditions should avail themselves of this opportunity.

CHANGES IN SCHEDULE

Students have one week from the beginning of each quarter in which to make adjustments in their schedule. After this time no changes will be permitted except by written permission of the dean of the particular school. The registrar will then recall the class card and discharge the student from the class.

No student will be allowed credit for courses added to his schedule without permission after it has been approved, and any student illegally dropping a course for which he has been registered will be assigned the grade "F" at the end of the quarter.

CLASS ATTENDANCE

Students will be required to attend scheduled assemblies, vespers and the regular exercises of the courses in which they are registered.

No student is entitled to any cuts whatever, a cut being defined as an unexcused absence from any class. Cuts will be considered on a course basis inasmuch as a student may cut repeatedly from a certain course while he attends regularly all his other classes.

As soon as a student is reported as having three cuts from any class that student will be placed on probation by the Dean of Men and the student's parents will be notified accordingly. The student and parents will be notified that if the student takes two more cuts from the course in which he already has three cuts he will be officially dropped from that course. Should a student cut excessively in all his courses the result will be dismissal from the institution for the remainder of the quarter.

SCHOLARSHIP

Students will be expected to do a passing grade of work at all times. Students failing to attain a "C" average in any quarter will be placed on probation the following quarter. Unless definite improvement is made while on probation, the student may be asked to withdraw.

HONOR ROLL

To encourage scholarship and integrity, the College publishes an Honor Roll at the end of each quarter. Regular students whose average grade in all courses is "B" shall be eligible for the Honor Roll. Those students whose grade point average is 2.5 each quarter for three consecutive quarters shall be eligible for an Alumni Scholarship.

WITHDRAWAL FROM COLLEGE

Students who for any reason find it necessary to withdraw from College before the scheduled termination of the school year should file an official withdrawal with the bursar. Forms for this purpose may be secured in the office of the registrar. Students should have these forms signed by the designated officials and filed before leaving the campus.

All accruing accounts and obligations against such students will terminate on date of filing withdrawal notice. Accruing accounts will continue against those failing to file notice of withdrawal.

EXTRACURRICULAR ACTIVITIES

Each student shall be encouraged to participate in some (one) extra-curricular activity, upon which he shall be graded with regards to excellence. Special consideration will be allowed students who bring their band or orchestra instruments.

QUARTERLY EXAMINATIONS

A final examination will be required as a part of every course. An examination schedule showing time and place of meeting of each course and section will be published quarterly. Schedules so published will be followed without variation in any respect, except by special permission of the dean of the school in which the course is offered.

DEPORTMENT

Any student who manifests unwillingness to conform to the rules and regulations that are prescribed, or that may be prescribed to govern the student body, or any student whose influence or deportment seems detrimental to the best interests of the school will be asked to withdraw from the institution.

A student automatically forfeits his privilege of working for pay at the College when, for any reason, he is placed on probation because of misconduct.

TEACHERS' DAILY REPORTS

Teachers are required to file in the office of the registrar a report of their classes and other official activities daily. This report should show among other things the number of classes scheduled, the classes taught, the number of students present and absent and a list of those absent. This report must be filed at the end of each teaching day.

TEACHERS' QUARTERLY REPORTS

Each teacher will be required to file duplicate copies of his final report of grades for each class. These reports showing the name of each student registered in the class and the mark assigned for the quarter together with copies of the final examination questions will be filed, the original in the registrar's office and the duplicate in the office of the dean of the appropriate school, on or before the scheduled date for such reports. Teachers are cautioned to see that the name of every student assigned to their classes appears on the class roster with a mark correctly assigned. After marks have been filed in the registrar's office, teachers cannot change them except by petition to the Administrative Council.

REGISTRATION OF MOTOR VEHICLES

The college discourages students owning motor vehicles of any type, but all who own or operate cars must have them registered with the college. The registration fee is one dollar per quarter and is payable at the time of registration.

RELIGIOUS ACTIVITIES

It is the purpose of the college to maintain a high moral tone and develop a broad, tolerant religious spirit among its students. There are eight religious activities groups operating on the campus as part of a federation known as the Fellowship Council. The F. C. cuts across denominational lines and serves the entire campus. Though denominational interests are emphasized through group activities, all public religious services are free of sectarianism. The Director of Religious Education supervises the work of the several groups. The groups are as follows: Baptist Student Union, Newman Club, Westminster Fellowship, Y.M.C.A., Y.W.C.A., Wesleyan Club, Sunday School, and Ushers.

DORMITORY REGULATIONS

BOARDING STUDENTS

All students who room on the campus must take meals in a college cafeteria.

NON-RESIDENT STUDENTS

Students whose legal residence is not in Greensboro will not be permitted to board and lodge off the campus unless they have special permission, or unless they have employment that requires them to live on the premises.

FRATERNITY HOUSES

The College will not permit fraternities, sororities or other groups to establish "houses" off the campus.

DISCIPLINARY SUSPENSION

All students, except bona fide residents of Greensboro, are required to leave the campus and the city within forty-eight hours after disciplinary suspension. Permission to re-enter the College will not be granted if this regulation is violated.

DORMITORY PROVISIONS

The College provides for each student a bed, bureau, study table and straight chair. Students are required to furnish their own curtains, blankets, bed linen, rugs and towels. Electrical appliances, other than those already supplied, are forbidden. Exception: Radios.

CREDIT EVALUATION SYSTEM

The credit value of each course is indicated by three numbers. The first represents the full credit value in quarter hours, the second, the number of recitations per week, and the third, the number of hours spent in the laboratory each week. For example: French 211, Credit 5(5-0) means that this course carries 5 hours credit, and is conducted by lecture or recitation 5 times per week with no assigned laboratory; while Chemistry 112, Credit 5(3-4) carries 5 hours credit; 3 hours being devoted to lecture or recitation and 4 spent in the laboratory. Two hours in the laboratory are required for 1 hour of credit.

GENERAL GRADUATION REGULATIONS

(For special graduation requirements for each School—see pages 60, 62)

Graduation from the A. and T. College involves the satisfaction of the following requirements:

1. The candidate for a degree must have selected a specific curriculum having the approval of the Dean of the School in which he is registered. This curriculum must be completed.

2. Whether registered in Agriculture, Education and Sciences or Mechanic Arts, he must complete at least 200 quarter hours and 200 grade points.

3. The credit hours must aggregate at least 200, including the required courses in military science and physical education. The grade points must equal 1 times the number of credit hours undertaken, whether passed or failed. After securing 200 credit hours if the student is deficient in grade points, he must take additional courses to secure these points. The student must obtain an average of 1.5 or more in his major field and 1.0 or more in his minor field. A minimum of one year in residence is required.

4. It is the aim of the institution to send forth men and women who are fit representatives. To this end, the College reserves the right to refuse to admit any student to the Senior Class or to graduate anyone who though qualified by class record may otherwise seem unfit.

5. Payment of diploma fee of five dollars (\$5.00) must be made to the bursar on or before February 1 preceding graduation.

6. Students in the graduating class must clear all conditions by the end of the quarter preceding graduation.

7. Candidates for graduation must file an application for graduation upon the form provided, at least four months prior to the date they expect to graduate.

GRADUATION WITH HONORS

By a vote of the Administrative Council in the Spring of 1938, it was decided that henceforth graduation honors would be awarded candidates completing all requirements for graduation in accordance with the following stipulations: (1) Those who maintain throughout their course a grade point average within the range of 2.00 to 2.24 will receive "honor"; (2) those who maintain a general average within the range from 2.25 to 2.49 will receive "high honor"; and (3) those who maintain an average within the range from 2.50 to 3.00 will receive "highest honor." Publication of honors in scholarships is made at graduation and in the college catalog.

DEGREES

All students successfully completing any of the four-year courses of study shall be entitled to the degree of Bachelor of Science.

1. Those graduating from a four-year curriculum offered in the School of Mechanic Arts shall be entitled to the Bachelor of Science degree in Engineering, Architectural Engineering, Industrial Arts, Fine Arts, Commercial Industries, Business Administration or Commercial Education.

2. Those graduating from a four-year curriculum in Agriculture shall be entitled to the degree of Bachelor of Science in Agriculture.

3. Students successfully completing a curriculum in the School of Education and Sciences shall be entitled to the degree of Bachelor of Science.

4. The Master of Science degree will be awarded those meeting requirements for same. See page 69.

STUDENT ORGANIZATIONS

ALPHA KAPPA MU HONOR SOCIETY

The Alpha Kappa Mu Honor Society is a national scholarship organization with local chapters established in grade "A" colleges.

The local chapter is now known as the Gamma Tau Chapter of the Alpha Kappa Mu Honor Society, and qualifications for Gamma Tau which have been changed to conform to those of the National Organization are as follows:

1. Candidate must have completed ninety quarter hours or sixty semester hours with an average of not less than 2.3 These must include all required courses listed for freshmen and sophomores.

2. Membership is open to all students of the College provided they meet scholastic requirements; in the case of transfer students, there must have been a chapter of Alpha Kappa Mu or some other honor society with equivalent standards, rules and regulations at the institution from which they transferred.

3. Candidates must never have been suspended for disciplinary problems.

The Society encourages participation in at least one extracurricular activity. All students recommended by the registrar and personnel deans as having the qualifications listed above are eligible for membership.

SOPHIST SOCIETY

This organization is composed of regular college students of Freshman, Sophomore, and Junior classification who maintain a minimum average of 2.3. The purpose of this organization is to encourage high scholarship among all college students.

Persons who remain in the Sophist Society for three years are eligible for membership in Alpha Kappa Mu Honor Society during the senior year.

SIGMA RHO SIGMA RECOGNITION SOCIETY

Sigma Rho Sigma Recognition Society is a national honor society for Social Science majors; its membership is open to graduates and undergraduates. Chapters of the society are located in the various colleges represented in the membership of the Association of Social Science Teachers in Negro colleges.

The purposes of the society are:

1. To encourage study, promote research and to recognize achievement in the field of social science.
2. To promote the cooperation of students in the field of human relations.
3. To promote professional growth and development among the members.

To be eligible one must:

1. Be a junior concentrating in the social sciences, with an average of two points or above and have a minimum credit of 25 hours in major courses in the social sciences.

BETA KAPPA CHI

Beta Kappa Chi is a Recognition Society for honor students in fields of Science and Engineering.

FRATERNITIES

The following national fraternities have chapters at the college: Alpha Phi Alpha, Omega Psi Phi, Phi Beta Sigma, and Kappa Alpha Psi.

SORORITIES

The following national sororities have established local chapters: Alpha Kappa Alpha, Delta Sigma Theta, Zeta Phi Beta, and Iota Phi Lambda.

PAN-HELLENIC SOCIETY

The Pan-Hellenic Society is a federation of all fraternities and sororities on the campus. Its membership is composed of elected representatives from each Greek-letter organization. The main purpose is joint action for maintaining high standards in fraternity and sorority life at the institution.

COLLEGIATE 4-H CLUB

The Collegiate 4-H Club is composed of students who have had previous experience as 4-H Club members in high school. An informal meeting of a business and social nature is held monthly. Honorary members may be elected to the club from time to time.

THE COLLEGIATE NFA CLUB

The Collegiate Chapter of the New Farmers of America is composed of agricultural students who are former NFA members or trainees enrolled in the teacher training department of the School of Agriculture. The purpose of the collegiate chapter is to give training and experience to students who will later become teachers of vocational agriculture. Honorary members may be elected to the collegiate chapter of the New Farmers of America.

THE AGRICULTURAL ASSOCIATION

This association is composed of agricultural students. It meets twice monthly for business and social purposes.

Honorary members may be elected to the association from time to time.

THE COLLEGE BAND

The College Band of more than fifty pieces occupies an important place in the life of the institution. Instruction by an expert bandmaster

is given in all band instruments. A splendid opportunity is thus offered competent and worthy students to learn band music without extra expense to themselves.

Membership in the band is open to regular students of the College.

FOREIGN LANGUAGE CLUBS

Le Cercle Francais and *El Circulo Espanol* meet once a month during the academic year.

THE FORTNIGHTLY CLUB

This organization, which gets its name from the period normally intervening between each meeting, is composed mainly of English majors and other advanced students who are interested in coming together for the purpose of exchanging ideas about books and people that have influenced or are influencing the life of their time.

THE DEBATING SOCIETY

The Kappa Phi Kappa Forensic Society, better known as the Debating Society, is designed to stimulate interest in public speaking and debate. It is composed of college students who have distinguished themselves in public performances in these fields.

The Society awards a certificate of merit to any graduating senior who has participated in non-varsity debates or who has otherwise rendered meritorious service to the Kappa Phi Kappa Forensic Society for at least two years.

THE A. AND T. LITTLE THEATRE

The A. and T. Little Theatre is an outstanding campus activity whose genuinely artistic work bespeaks the excellent training and unusual opportunities rendered by the dramatic workshop and laboratory theatre for unlimited experimentation in acting, playwriting, stagecraft, and play direction.

CHORAL ORGANIZATIONS

The Choral Society, The Men's Glee Club and The A Capella Choir have won for themselves an enviable reputation, both at home and abroad, for the genuine artistry of their work. These organizations, open to all qualified students, offer extracurricular activity which is at once instructive and enjoyable.

SCHOLARSHIPS AND PRIZES

COLLEGE SCHOLARSHIPS

The College will grant a scholarship for one year to any student who makes a grade average of 2.5 for the three quarters of the preceding school year. This scholarship will pay tuition and can be used for no other purpose.

SCHOLARSHIPS IN DAIRY HUSBANDRY

Six scholarships are given each year to high school graduates who wish to take a one-year short course in dairy husbandry. Board, room and all fees are paid. Applications should be obtained from the Dean of Agriculture before August 1 of each year.

NFA SCHOLARSHIPS

The College offers a one-year scholarship of \$50.00 to the NFA member graduate from high school who has the best record in supervised practice work and scholastic activities for a period of four years.

Y.W.C.A. SCHOLARSHIP

As a means of promoting scholarship among high school girls and to encourage them to attend college, the College Y. W. C. A. offers, each year, a scholarship of \$50.00 to be used in defraying college expenses. The selection is made by the May Queen at the "Y" May festival.

4-H CLUB SCHOLARSHIP

In order to promote interest among Negro 4-H Club boys in North Carolina and to encourage continuous achievements in all phases of 4-H Club work, the College offers a one-year scholarship of \$50 to the high school graduating senior with the best record in 4-H Club work. This is to be used in defraying expenses at the institution.

WILLIAM H. FOUSHEE MEMORIAL SCHOLARSHIP CUP

Dr. J. M. McGee of Greensboro, each year presents a scholarship cup in memory of William H. Foushee, Jr., a former student of A. and T. College, to the member of the Junior Class with the highest scholastic average.

THE CHARLES L. COOPER AWARD

Mu Psi Chapter of the Omega Psi Phi Fraternity presents annually this award in memory of Dr. Charles L. Cooper, a former professor of Industrial Education at A. and T. College. It is presented to the student in Industrial Arts with the highest average above two points.

THE REGISTER AWARD

As a means of promoting a wider interest and greater activity on the part of the students in the field of journalism, the College *Register* awards a gold key to those members of the graduating class who completed a period of at least two years of meritorious service as members of the *Register* staff.

ALUMNI ATHLETIC AWARD

The Philadelphia branch of the College Alumni Association awards a gold medal each year to the student of the graduating class making the best record in major intercollegiate sports.

ALUMNI SERVICE AWARD

The Gate City (Greensboro) Chapter of the Alumni Association makes an award each year to that member of the graduating class, voted by the Administrative Council as having rendered the "most distinctive service to the College and to the community."

THE KAPPA PHI KAPPA KEY

The Kappa Phi Kappa Key was first awarded in 1928 by the Kappa Phi Kappa Debating Society.

The key is awarded to the member, or members of the graduating class who have been speakers on the college varsity team for two years.

COHEN PRIZE

The Ned Cohen Prize is given by the Ned Cohen Jewel Box of Greensboro, to the student in secretarial science who receives the highest scholastic average.

DEBATING TROPHY

The Rand-Hawkins-McRae debating trophy is provided by Messrs. J. M. Rand, J. A. Hawkins and S. D. McRae, graduates of the College, Class of 1906, and is awarded annually to the members of the graduating class who have at least three years of varsity debating.

MEDALS

The John Merrick Medal will be awarded to the student completing the four-year mechanical course with the best record in the college department.

The M. F. Spaulding Medal will be awarded to the student completing the full four-year course in agriculture with the best record.

The Saslow's Inc., Medals will be awarded (a) to the member of the graduating class who completes the four-year course in the School of Education and Sciences with best record, and (b) to the student who graduates with best record in Social Sciences.

The Regal Jewelers Medals are awarded each year to two or more students in the graduating class with the best records in their respective fields.

ALUMNI LOAN FUND

The primary purpose of this loan fund is to provide financial aid to needy students who have demonstrated their potential ability to become useful citizens. Evidences of this ability are character, mental alertness, industry, and scholarship. No student is encouraged to burden himself with debt unless he has a definite purpose in continuing his formal education at the College.

When a student's application is approved, he must sign a formal note for the amount of the loan. For Juniors the note is usually made out payable on or before entering school the following fall. For Seniors the note is usually made out payable within one year from the date of the loan. For emergency loans the note is made out payable within thirty to sixty days from the date of the loan.

No student may borrow more than \$50.00 within one year. Usually loans will be limited to \$20.00 or less a quarter. The amount of the quarterly loan may be exceeded in exceptional cases, but the maximum of \$50.00 will not be exceeded in any case.

All money borrowed from the Alumni Loan Fund must be used for direct college expenses. Such expenses may be tuition, room rent in a college dormitory, board at the College Dining Hall, books at the College Canteen, and laboratory fees. No cash will be issued on any loan.

HICKS-MOSLEY STUDENT LOAN FUND

The Hicks-Mosley Student Loan Fund which was established during the school year 1939-40 by Miss Esther Hicks, commercial education instructor at the College, in honor of her parents, is designed to aid worthy students who have clearly evidenced talent and ability but who lack the means to continue their schooling and deserve moderate financial aid that will enable them to complete their studies.

Small amounts of money will be loaned at the crucial times when deemed advisable and a moderate rate of interest charged. Students are to apply by written application according to the time schedule indicated below, and all loans are due (both principal and interest) September 1, of the year after loan is granted. All loans must be secured by legal note.

Students desiring loans should apply during the following periods:

For loans granted Fall Quarter,
September 1, September 15.
For loans granted Winter Quarter,
December 1, December 15.
For loans granted Spring Quarter,
March 1, March 15.

SUMMER SCHOOL

*In Point of Continuous Service, the Oldest Summer School
in the Country for Negroes*

The fiftieth annual summer session of the A. and T. College Summer School will begin June 9, 1952, and continue for eleven weeks, thereby completing a full quarter of college work under the new accelerated plan.

Aside from the splendid opportunity which the Summer School offers teachers-in-service to raise their certificates and thereby obtain better salaries, the College makes it possible for the ambitious teacher to obtain a standard degree by attending the summer school.

College students may shorten their stay in college by attending summer school. Students from other institutions may enter the summer sessions for credit in their respective institutions, by permission from either the president or dean of their respective colleges. Such students will not be required to present a complete record of their previous training, but will be required to present a signed statement from the president or dean indicating the summer courses for which credit will be allowed.

College graduates may use their time in summer school meeting requirements for the Master of Science degree. Persons interested in earning this degree should make application for candidacy early in order that their program may be arranged with this end in view.

EVENING SCHOOL

The College conducts an evening school for in-service-teachers and others who can qualify for the courses offered. All evening courses are conducted on the same basis as courses that are offered in the regular day classes, and may be applied towards a degree. Admission requirement for the Evening School is the same as for the regular day classes.

EXPENSES AND FEES

1951-1952

Boarding students entering for the first time should be prepared to make the following payments:

	<i>Men</i>	<i>Women</i>
Board ($\frac{1}{2}$ month)	\$ 11.00	\$ 11.00
Lodging ($\frac{1}{2}$ month)	5.00	5.00
*Tuition, Fall Quarter	43.50	43.50
Laundry	2.00	1.00
**Registration	9.00	9.00
†Medical Fee	5.00	5.00
Athletic Fee	10.00	10.00
Laboratory Fee	5.00	5.00
College Register Fee (Student Publications)	3.00	3.00
Rental Mailbox	1.00	1.00
Dormitory Room Key Deposit .....	.50	.50
Library and Laboratory Deposit	2.00	2.00
Student Activity Fee	2.00	2.00
Examination Supplies and		
Student Identification Picture	2.00	2.00
Student Aid Fund .....	.50	.50
†Total payment first month, Sept. 12, 1951.....	\$101.50	\$100.50

(A deposit of ten dollars must be added to this total by all R. O. T. C. students. See page 139.)

Second payment, due Oct. 1, 1951.....	\$ 34.00	\$ 33.00
Third payment, due Nov. 1, 1951.....	34.00	33.00
Fourth payment, due Dec. 1, 1951 through Dec. 21, 1951	28.50	27.50
Fifth payment, due Jan. 2, 1952		
*(Quarterly lab. and tuition fees due).....	77.50	76.50
Sixth payment, due Feb. 1, 1952	34.00	33.00
Seventh payment, due March 1, 1952	34.00	33.00
Eighth payment, due April 1, 1952		
*(Quarterly lab. and tuition fees due).....	77.50	76.50
Ninth payment, due May 1, 1952	34.00	33.00
Grand Total	\$455.00	\$446.00

*An out of state tuition of \$22.00 per quarter will be charged for non-residents of North Carolina.

**Registration fee includes lectures and lyceum entertainments and library privileges.

†Medical Fees: All students will be charged a fee of \$5.00 which will cover physical examination, medicine, prescriptions issued by College Physician only and first aid.

Other medical charges:

 City students confined to bed in the Infirmary.....\$1.50 per day

 Ambulance service 2.00 per trip

†Students, in paying their September entrance fee, may also make the second payment, which is due October 1, if they so desire.

A student boarding and lodging in the city should be prepared to make the following payments:

*Tuition—\$14.50; Custodial Care—\$5.50 (Monthly).....	\$ 20.00
**Registration	9.00
†Medical Fee	5.00
Athletic Fee	10.00
Laboratory Fee	5.00
College Register (Student Publications)	3.00
Student Activity Fee	2.00
Library and Laboratory Deposit	2.00
Examination Supplies and	
Student Identification Picture	2.00
Student Aid Fund .....	.50

Total payment first month, Sept. 12, 1951.....	\$ 58.50
Second payment, due Oct. 1, 1951.....	\$ 20.00
Third payment, due Nov. 1, 1951.....	20.00
Fourth payment, due Dec. 1, 1951.....	20.00
*Fifth payment, due Jan. 2, 1952	
(Quarterly lab. fees due).....	25.00
Sixth payment, due Feb. 1, 1952.....	20.00
Seventh payment, due March 1, 1952.....	20.00
*Eighth payment, due April 1, 1952	
(Quarterly lab. fees due).....	25.00
Ninth payment, due May 1, 1952.....	20.00
Grand Total	228.50

Health examinations will be administered to freshmen and other new students September 12, 13, 14, and to upperclassmen September 14, 15, 17. These examinations are prerequisite to registration.

GRADUATE SCHOOL CHARGES

1. All persons taking 14 hours or more will be charged the customary fees and charges of an undergraduate student.
2. Persons taking 13 hours or less may elect to pay \$5.00 per hour tuition plus the following fees:
 - (a) Library Fee—\$3.00
 - (b) Laboratory Fee (If any)
 - (c) Library and Laboratory Deposit—\$2.00
3. First Registration Fee—\$5.00.

VACCINATIONS

Each student is required to be vaccinated on entering unless evidence be presented to satisfy the college physician that vaccination is unnecessary.

*An out of state tuition of \$22.00 per quarter will be charged for non-residents of North Carolina.

**Registration fee includes lectures and lyceum entertainments and library privileges.

†Medical Fees: All students will be charged a fee of \$5.00 which will cover physical examination, medicine, prescriptions issued by College Physician only and first aid.

Other medical charges:

City students confined to bed in the Infirmary.....	\$1.50 per day
Ambulance service	2.00 per trip

QUARTERLY FEES

1951-1952

	<i>Fee Per Course</i>
Agricultural Economics 123, 141, 501.....	\$ 2.00
Agricultural Engineering 111, 122, 123, 124, 131, 132, 500.....	4.00
Animal Husbandry 111, 122, 124, 133.....	2.00
Animal Husbandry 131, 132, 142, 144, 501.....	3.00
Architectural Engineering 321, 322, 323, 324, 331, 332, 333, 334, 335, 336, 341, 342, 343, 345.....	3.00
Art 317, 318, 319, 337, 338, 339.....	5.00
Art 311, 312, 314, 320, 321, 322, 323, 331, 332, 333, 334, 335, 336, 341, 342.....	3.00
*Auto Mechanics (10 Hours Credit).....	5.00
Auto Mechanics 311, 312, 313.....	2.50
Bacteriology 123, 132.....	3.00
Biochemistry 134, 135, 148, 506.....	5.00
Botany 111, 112, 121, 131, 133, 141.....	3.00
Cabinet Making (10 Hour Course).....	6.00
Cabinet Making 311, 312, 313, 314.....	2.50
Carpentry (10 Hour Course).....	5.00
Carpentry 311, 312, 313, 314.....	2.50
Chemistry, 111, 112, 113, 121, 122, 123, 131, 132, 133, 141, 142, 143, 145.....	5.00
Child Development and Family Relationship 112, 114, 124, 132...	2.00
Clothing, Textiles and Related Art 111, 112, 120, 121, 124, 125, 126, 131, 132, 133, 134, 135, 141, 502.....	2.00
Commercial Education 317, 318, 319, 322, 323.....	5.00
Commercial Education 324	3.00
Dairy Husbandry 123, 134, 141, 142, 144.....	3.00
Dry Cleaning 311, 312, 313.....	2.50
Education 622, 225, 236, 501, 502.....	2.00
Electrical Engineering 321, 322, 323, 324, 325, 326, 333, 334, 335, 346, 347, 348, 354, 355, 356, 357.....	3.00
Foods and Nutrition 121, 122, 123, 131, 132, 133, 134, 501.....	4.00
Field Crops (Agronomy) 111, 122, 124, 131, 502.....	2.00
Fruits and Vegetable Production (Horticulture) 111, 122, 133, 134, 135, 142, 141.....	2.00
General Science 131, 132.....	3.00
Geology 111.....	3.00
Home Administration 113, 134, 142.....	2.00
Industrial Arts Education 321, 322, 323.....	5.00
Industrial Arts 325, 326, 327, 328, 331, 332, 333, 338, 338A, 339, 339A, 340, 340A, 348.....	2.50
Laundry Management 311, 312, 313.....	2.50

*All large equipment and special tools are furnished by the College but the student is expected to furnish a set of small tools and protective clothing.

Masonry (10 Hours Credit)	5.00
Masonry 311, 312, 313	2.50
Mechanical Engineering 311, 312, 313, 323, 328, 329, 330	3.00
Mechanical Engineering 317	2.50
Mechanical Engineering 321, 342, 343	1.00
Mechanical Engineering 346, 351, 352	2.00
Ornamental Horticulture 112, 131, 132, 133, 134, 141, 142, 143, 144	2.00
Physical Education 221	3.00
Physics 311, 312, 313, 314, 321, 322, 323, 334, 335, 337, 502, 503	3.00
Poultry 111, 112, 122, 123, 131, 141	2.00
Plumbing (10 Hours Credit)	5.00
Plumbing 311, 312, 313	2.50
Radio 311, 312, 313	2.50
Shoe Repairing (10 Hours Credit)	5.00
Shoe Repairing 311, 312, 313, 314	2.50
Soils (Agronomy) 123, 134, 142	3.00
Tailoring (10 Hours Credit)	6.00
Tailoring 311, 312, 313	2.50
Vocational Industrial Education Laboratory Courses	5.00†
Welding (10 Hours Credit)	8.00
Welding 311, 312, 313	4.00
Zoology 111, 121, 122, 132, 133, 142, 143	3.00

OTHER FEES

Rental of cap and gown	\$ 3.00
Certificate fee	3.00*
Diploma fee	5.00
Fee (for each transcript of student's record after the first)	1.00*
Fine per day for late class registration each quarter	1.00
Radio fee per month .....	.50
Music (two lessons per week and use of Piano for practice per month)	4.00
Practice teaching (other than Vocational Agriculture)	25.00
Senior Engineers Inspection Tour Fee	50.00

NOTE: All fees and bills are payable in advance. Make all post office money orders, bank drafts and cashier's checks payable to A. and T. College. Personal checks are not accepted unless certified.

†Vocational Industrial Education Laboratory Courses.

Field of Specialization	Course Number
V.I. Ed. Auto Mechanics	321, 322, 323, 331, 332, 333, 341, 342, 343
V.I. Ed. Cabinet Making	321, 322, 323, 331, 332, 333, 341, 342, 343
V.I. Ed. Carpentry	321, 322, 323, 331, 332, 333, 341, 342, 343
V.I. Ed. Machine Shop	321, 322, 323, 331, 332, 333, 341, 342, 343
V.I. Ed. Masonry	321, 322, 323, 331, 332, 333, 341, 342, 343
V.I. Ed. Plumbing	321, 322, 323, 331, 332, 333, 341, 342, 343
V.I. Ed. Radio and Television	321, 322, 323, 331, 332, 333, 341, 342, 343
V.I. Ed. Shoe Repairing	321, 322, 323, 331, 332, 333, 341, 342, 343
V.I. Ed. Tailoring	321, 322, 323, 331, 332, 333, 341, 342, 343
V.I. Ed. Welding	321, 322, 323, 331, 332, 333, 341, 342, 343

*These fees must be paid not later than February 1 by all persons expecting to complete courses of study during the regular year.

LODGING DEPOSITS

Students should reserve rooms far in advance of the time of arrival by paying the room deposit of five dollars, which will later be credited to their account upon presentation of receipt. If for any reason a student fails to register, the lodging deposit will be refunded, provided application for same is made within ninety days after the appointed day of registration. If application is not made within that time the deposit will be forfeited.

WORK STUDENTS

Industries operated at the College afford opportunity for a limited number of needy but industrious students to help themselves by working for the College. This will be at a given rate of pay and accredited to their accounts at the end of each month. It is not possible to state definitely and in advance how much a student may earn per month.

ENTRANCE FEES

Each student must pay in cash all entrance fees and expenses for the first month, when he registers. See page 48 for complete list of fees and expenses.

MONTHLY AND QUARTERLY FEES

Any student whose bills are not paid on or before the day following the date on which such bills are due will be excluded from all college privileges until such bills are paid.

LATE FEES

Each registrant will be required to pay one dollar for each day that he is late after the last day assigned for registration.

RADIOS

Students who desire radios in their rooms will be required to pay a radio fee of 50 cents per month to cover the cost of current used.

MEDICAL EXAMINATION FEES

All regularly enrolled students of the College will be required to take a physical examination upon entrance. The College Physician, or some other physician designated by him, will be in charge of all examinations. Day students will be assessed a small fee to cover this and other emergency services.

MILITARY SCIENCE DEPOSIT

All students taking military training are required to make a deposit of ten dollars for uniforms. This deposit will be refunded when the uniform is returned in good condition. (All freshmen and sophomores unless excused by the College Physician are required to take military training.)

SPECIAL NOTICE

Due to the rising cost of living the Administration reserves the right to raise fees and charges without advance notice should conditions warrant.

F. D. BLUFORD, *President.*

OUT-OF-STATE STUDENTS

Non-resident students must pay an out-of-state charge. A non-resident student is one who comes into North Carolina from another state or foreign country for the purpose of attending college.

For this purpose any student whose parents have not lived in this state for more than six months immediately prior to his or her first enrollment in this college will be considered as non-residents, except in the case of:

1. Students twenty-one years of age at the time of their first enrollment, and responsible for their bills, who have resided in North Carolina for more than one year preceding the day of their first registration.
2. Students whose parents are in the United States military or government service and stationed out of state. In both of these cases such students will be regarded as residents.

Students cannot claim a change in resident status after they have enrolled. Those misrepresenting themselves in this respect in order to avoid paying out-of-state fee will be subject to disciplinary action by the college.

SELF-HELP

The institution cannot guarantee jobs to students who expect to work their way through college. Many students find work in private families and in other occupations, by means of which they defray a portion of their expenses. A person of ability and energy who can do work of any kind can generally find employment, but prospective students are cautioned against depending upon such unreliable sources of income.

INSTITUTIONAL ORGANIZATION

SCHOOL OF AGRICULTURE

WILLIAM E. REED, *Dean*

The School of Agriculture is organized into the following departments: (1) Agricultural and Home Economics Education—Agricultural Education, Home Economics Education, Agricultural and Home Economics Extension; (2) Agricultural Economics — Agricultural Economics, and Rural Sociology; (3) Animal Industry—Animal Husbandry, Dairy Husbandry, and Poultry Husbandry; (4) Biology—Bacteriology, Botany, General Science, and Zoology; (5) Chemistry—Biochemistry, and Chemistry; (6) Home Economics—Child Development and Family Relationship, Clothing, Textiles and Related Art, Food and Nutrition, and Home Administration; (7) Plant Industry—Agricultural Engineering, Field Crops, Fruits and Vegetable Production, Geology, Ornamental Horticulture, and Soils; and associated departments, consisting of state subject-matter, supervisory and administrative personnel, of (8) Agricultural and Home Economics Extension Service, and (9) Vocational Agriculture.

The School of Agriculture offers students four-year programs of study leading to the degree of Bachelor of Science. These courses of study are designed to give not only scientific, technical, and practical training in the several specialized fields, but also provide for the development of a broad educational and cultural background which fits the student for more varied fields of endeavor.

In Agriculture the degree of Bachelor of Science is offered in the following:

1. Agricultural Biochemistry
2. Agricultural Education
3. Agricultural Engineering
4. Agricultural Marketing
5. Agronomy
6. Animal Husbandry
7. Dairy Husbandry
8. Farm Management
9. General
 Agricultural
 Economics
10. Horticulture
11. Poultry Husbandry
12. Ornamental Horticulture

In Home Economics the degree of Bachelor of Science is offered in the following:

1. Clothing, Textiles and Related Art
2. Foods and Nutrition
3. General Home Economics
4. Home Economics Education
5. Nursery School Education

For those students who do not plan to remain in college for a four-year period, two-year terminal programs leading to a certificate are offered in Poultry Husbandry, Animal Husbandry, Dressmaking, and Cafeteria Management. Considerable flexibility is allowed in these two-year programs so as to meet the varied needs and interests of the students. These programs are designed for those who wish to prepare for productive enterprises and services.

All students who pursue programs of study in Agriculture leading to the degree of Bachelor of Science should follow the Basic Curriculum in Agriculture for the freshman and sophomore years.

All students who pursue programs of study in Home Economics leading to the degree of Bachelor of Science should follow the Basic Curriculum in Home Economics for the freshman and sophomore years.

In the last quarter of the sophomore year the student should elect his major and, at this time, work out a complete program of study for his junior and senior years in conference with the Head of the Department of his major field. With the approval of the Dean of the School of Agriculture this program constitutes the student's requirements for graduation.

Normally a minimum of 30 quarter hours will be required for a major in any subject matter area, plus an additional 15 quarter hours in closely related courses. A minimum of 200 quarter hours of credit and a grade point average of 1 is required for graduation.

Students who plan to do graduate work in such specialized areas as Soil Science, Nutrition and Entomology will be permitted to pursue a program of study which includes courses designed to develop a sound scientific background.

The School of Agriculture offers a two-year pre-veterinary curriculum which meets the requirements for admission to schools of veterinary medicine as recommended by the American Association of Veterinary Medicine.

This program includes basic courses which are more than adequate for admission to most of the veterinary schools.

Since there is no School of Veterinary Medicine in North Carolina, the State has provided funds that will permit a limited number of students each year to receive training in veterinary medicine at an approved institution without having to pay out-of-state tuition fees normally charged students who are not residents of that state.

The Agricultural and Technical College of North Carolina has been designated to pass on the educational qualifications of all Negro students in North Carolina who apply to a School of Veterinary Medicine under this plan.

BASIC CURRICULUM IN AGRICULTURE

<i>Freshmen</i>	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
English 211, 212, 213	5 (5-0)	5 (5-0)	5 (5-0)
Botany 111, Zoology 111	5 (3-4)	5 (3-4)	.....
Geology 111 .....	.....	.....	4 (3-2)
Mathematics 311, 312, Physics 311	5 (5-0)	5 (5-0)	5 (3-4)
Animal Husbandry 111	3 (2-2)	.....	.....
Poultry Husbandry 111 .....	.....	3 (2-2)	.....
Field Crops 111 .....	.....	.....	3 (2-2)
Military Science 211, 212, 213	2 (3-2)	2 (3-2)	2 (3-2)
Physical Education 210a, 210b, 210c	1 (0-2)	1 (0-2)	1 (0-2)
	<hr/> 21	<hr/> 21	<hr/> 20

<i>Sophomore</i>	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Chemistry 111, 112, 113	5 (3-4)	5 (3-4)	5 (3-4)
Animal Husbandry 122	3 (2-2)	.....	.....
Poultry Husbandry 122 .....	.....	3 (2-2)	.....
Fruits and Vegetable Production 111, 122..	3 (2-2)	.....	3 (2-2)
Agricultural Engineering 111, 122	3 (1-4)	.....	3 (2-2)
Economics 231 .....	.....	5 (5-0)	.....
Field Crops 122, Soils 123 .....	.....	3 (2-2)	4 (2-4)
Military Science 221, 222, 223	2 (3-2)	2 (3-2)	2 (3-2)
Physical Education 220a, 220b, 220c	1 (0-2)	1 (0-2)	1 (0-2)
	<hr/> 17	<hr/> 19	<hr/> 18

BASIC CURRICULUM IN HOME ECONOMICS

<i>Freshmen</i>	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
English 211, 212, 213	5 (5-0)	5 (5-0)	5 (5-0)
Mathematics 310	3 (3-0)	.....	.....
Physics 311 .....	.....	5 (3-4)	.....
Zoology 111 .....	.....	.....	5 (3-4)
Art 311	3 (0-6)	.....	.....
Home Economics Education 111	2 (2-0)	.....	.....
Clothing, Textiles and Related Art 111, 112	3 (1-4)	3 (2-2)	.....
Child Development and Family Relationships 112, 113 .....	.....	2 (1-2)	3 (3-0)
Home Administration 112, 113 .....	.....	3 (2-4)	5 (3-4)
Physical Education	1 (0-2)	1 (0-2)	1 (0-2)
	<hr/> 17	<hr/> 19	<hr/> 19

<i>Sophomore</i>	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
English 224 .....	.....	.....	3 (2-2)
*Chemistry 111, 112, 113	5 (3-4)	5 (3-4)	5 (3-4)
Zoology 121	5 (3-4)	.....	.....
Foods and Nutrition 121, 122, 123	5 (3-4)	4 (2-4)	5 (4-2)
Clothing, Textiles and Related Art			
121, 124, 125	3 (1-4)	2 (0-4)	2 (0-4)
Education 223 .....	.....	3 (2-2)	.....
Home Administration 123 .....	.....	.....	3 (3-0)
Child Development and Family			
Relationship 124 .....	.....	3 (2-2)	.....
Physical Education	1 (0-2)	1 (0-2)	1 (0-2)
	19	18	19

TWO-YEAR PRE-VETERINARY MEDICINE CURRICULUM

First Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Math 311	5 (5-0)	.....	.....
Botany 111	5 (3-4)	.....	.....
Zoology 111, 112 .....	.....	5 (3-4)	5 (3-4)
English 211, 212, 213	5 (5-0)	5 (5-0)	5 (5-0)
Chemistry 111, 112 .....	.....	5 (3-4)	5 (3-4)
Military Science 211, 212, 213	2 (3-2)	2 (3-2)	2 (3-2)
Physical Education 210a, b, c	1 (0-2)	1 (0-2)	1 (0-2)
	18	18	18

Second Year

Physics 311, 312 .....	.....	5 (3-4)	5 (3-4)
Chemistry 113 or 121, 131	5 (3-4)	5 (3-4)	.....
Zoology 123, 143	5 (3-4)	4 (2-4)	.....
English 224 or 225 .....	.....	.....	3 (2-2)
Animal Husbandry 111, 122, 133	3 (2-2)	3 (2-2)	3 (2-2)
Poultry Husbandry 111	3 (2-2)	.....	.....
Military Science 221, 222, 223	2 (3-2)	2 (3-2)	2 (3-2)
Physical Education 220a, b, c	1 (0-2)	1 (0-2)	1 (0-2)
Economics 231 .....	.....	.....	5 (5-0)
	19	20	19

*Not required of majors in General Home Economics; students will be permitted to substitute approved courses in place of Chemistry.

SCHOOL OF MECHANIC ARTS

J. M. MARTEENA, *Dean*

The School of Mechanic Arts offers many opportunities to students to help them prepare to meet the demands of industry for leaders and skilled workmen in various technical professions and vocations. In addition to the professional courses and those designed to prepare skilled workmen, the department offers training to prepare teachers in many of these fields. Students who complete the teaching requirements as outlined in the several curricula will qualify for the Class "A" Certificate.

The four-year courses leading to the Bachelor of Science degree are as follows: Architectural Engineering, Business Administration, Commercial Education, Vocational Industrial Education, Electrical Engineering, Fine Arts, Industrial Arts Education, Mechanical Engineering, Mathematics and Engineering Physics.

Majors in Mathematics or Physics are offered to students in all departments.

The Vocational Courses leading to certificates are as follows: Auto Mechanics, Carpentry, Cabinet Making and Upholstering, Shoe Repairing and Leather Work, Tailoring, Machine Shop Practice, Masonry, Secretarial Science, Plumbing and Steam Fitting, Welding, Radio Servicing, Electric Wiring, Laundry and Dry Cleaning.

MECHANIC ARTS DIVISION

In the past few years the State of North Carolina has invested many thousands of dollars in equipment for the various departments of the School of Mechanic Arts. Each department has among its equipment some of the latest designs in machinery and tools for each particular line of work.

ADMISSION TO THE SCHOOL OF MECHANIC ARTS

The admission requirements are generally the same as those given for entrance to the freshman class. One year of algebra and one year of plane geometry are required for students electing a curriculum leading to a B.S. degree. Students admitted with a condition in plane geometry will be required to remove it during their freshman year.

Students electing an engineering curriculum are required to have credit in Solid Geometry in addition to the above requirements.

ADVANCED STANDING

Students who have attended colleges of approved standing will be given appropriate credit for work completed there, upon the presentation of the proper certificate to the Registrar, who will determine the credits for the curriculum which the student wishes to take.

REQUIREMENTS FOR GRADUATION

The requirements for graduation in any division of the School of Mechanic Arts are the satisfactory completion of all courses in one of the prescribed curricula.

OUTLINE OF THE FIRST YEAR'S WORK OF ALL FOUR-YEAR CURRICULA

In order to permit all students in the School of Mechanic Arts to find out definitely what courses they desire to pursue the first year of all four-year curricula is made uniform.

An inspection trip to visit such industrial installations as a hydro-electric plant, a turbo-electric plant, a steel or aluminum manufacturing and fabrication plant, outstanding construction projects, etc., will be required for graduation in all curricula of engineering.

The inspection trip will be planned by the heads of the various departments of engineering for senior students and will take place during the Winter quarter of each year.

A fee of fifty (\$50.00) dollars will be charged all senior students in engineering to cover expenses for this trip.

Freshman Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Chemistry 111, 112, 113*	5 (3-4)	5 (3-4)	5 (3-4)
Mathematics 311, 312, 313**	5 (5-0)	5 (5-0)	5 (5-0)
English 211, 212, 213	5 (5-0)	5 (5-0)	5 (5-0)
Mechanical Drawing, M.E. 311, 312'	3 (0-6)	3 (0-6)	.....
Descriptive Geometry 314 .....	.....	.....	3 (1-4)
Military Science, M.E. 211, 212, 213	2 (2-2)	2 (2-2)	2 (2-2)
	<hr/> 20	<hr/> 20	<hr/> 20

*Students in Fine Arts and Industrial Education are not required to take Chemistry 113. Students in Industrial Education will take Physical Education and welding in their Freshman year.

**Students in Fine Arts may substitute History 213 for Math 313 and Art 320 for Chemistry in the Spring Quarter.

THE SCHOOL OF EDUCATION AND SCIENCE

WARMOTH T. GIBBS, *Dean*

The School of Education and Science offers to the student opportunity to prepare either for teaching or for any one of several distinct vocational and professional pursuits. The courses are so constructed that the student, although specializing, may also come in contact with subjects that possess wide cultural value and insure that broader outlook upon life which characterizes the educated man or woman. This school also offers professional courses in subjects required by the State Board of Education for the Standard "A" grade teaching certificate.

This School includes the following fields of study: economics, education, English, foreign languages, general science, music, physical education and the social sciences as well as subjects required for completion of the pre-medical and pre-law courses.

REQUIREMENTS FOR ADMISSION

Admission requirements to the School of Education and Science are the same as those given for entrance to the Freshman Class. See page 31.

MAJORS AND MINORS

A student upon entering his third year is expected to concentrate in two definite fields of study. In arranging his work he must conform to the following regulations: (1) At least forty-five hours of the total number required for graduation must be chosen from a particular subject or field, in which he must maintain a graduate point average of 1.5 or more. This will constitute the student's major group. (2) At least 27 hours must be chosen from another subject or field, in which he must maintain a grade point average of 1.0 or more.* This will constitute his minor group. The major should represent the student's principal field of interest and the minor, his second field. Persons preparing to teach are advised to complete majors in two fields.

No student is permitted to major or minor in a subject until he has filled out and turned in to the dean of the School of Education and Science the special application form for majors and minors and has, thereby, received the written approval of the heads of the two subject-matter departments in which he proposes to concentrate; that is, the department of his major and minor, or of his two major fields.

*Fifty hours are required for a major in English; forty hours for a minor.

The following are suggested as fields for major study in this School:

1. Biological Science.
2. Chemistry or Physics.
3. English.
4. Mathematics.
5. Modern Languages.
6. Music.
7. Physical Education.
8. The Social Sciences.

For a minor a student may elect Art, Military Science, Business or any of the fields mentioned above.

GRADUATION REQUIREMENTS

A minimum of 200 credit hours and 200 grade points is required for graduation.

In addition to majors and minors, each candidate for graduation will be required to meet the following distribution requirements both as to subjects and hours:

†1. Foreign language, 10 hours for those who present two admission units of high school credit in the same language, and who pass the placement test in same, others 15 hours.

*2. Mathematics, 10 hours.

3. English composition, 15 hours; and literature (English or American) 5 hours.

4. Science: 10 hours of chemistry or physics and 10 hours of biological sciences.

5. Social Science; History: of the Negro, of America, of Modern Europe**, 5 hours of each: 15 hours, total.

6. Music and art appreciation, 9 hours for those planning to teach; others 6 hours.

7. Military science, 12 hours.

8. Health and physical education, 9 hours for those planning to teach; others 6 hours.

9. Orientation, 1 hour.

10. Vocations, 6 to 10 hours.

11. Research, 3 hours.

*Persons holding a satisfactory State teacher's certificate may substitute general science for mathematics.

**Political science, economics or sociology may be substituted for modern European history.

†Foreign language is elective in the field of Physical Education.

SENIOR RESEARCH RULES

A candidate for the bachelor's degree in the School of Education and Science must satisfactorily complete a senior research project as part of the graduation requirement. This project may be written in the candidate's major or minor field, and the student may choose any instructor in the field in which he is writing the paper as his adviser. This adviser will automatically become a member of the senior research committee, the chairman of which is the instructor in charge of the research course (Research 246). The candidate is responsible both to his adviser and then to the chairman of the Senior Research Committee.

At the discretion of the instructor of Research 246, students who are candidates for graduation with honors or who for any other reason are capable of or willing to undertake a thesis of greater scope and higher caliber than required for other projects will be expected to have same typed and bound. It must be signed by the candidate's adviser, the Chairman of the Senior Research Committee, and the Dean of the School of Education and Sciences. It becomes the property of the College Library.

Each candidate is required to take the research course at least one quarter preceding the quarter in which he expects to graduate. Thus, students wishing to graduate in the spring must take the course not later than the Winter Quarter; those wishing to graduate in August may wait until the Spring Quarter preceding graduation.

The student is required to finish the research project by the end of the quarter in which he is taking Research 246. If, however, circumstances over which he has no control prevent him from completing the project in that time, it must, nevertheless, be completed on or before May 15 in the case of persons expecting to graduate in the spring. If a candidate for graduation in August is unavoidably prevented from completing his paper while taking the course, he must finish it two weeks before the date of graduation.

ELECTIVES

In addition to minimum distribution requirements, and a major and a minor, which are required, each student is permitted to elect such additional courses as will be necessary to satisfy the graduation requirements; in so doing he is urged to exercise the greatest care in order that his choice may add further to the integration and coordination of his program. All such electives must be made with the approval of the student's adviser.

The elective work may be taken in any of the departments indicated previously or from any other department of the institution subject to the approval of the Dean of the School of Education and Science.

Students are urged to elect courses in accordance with a definite plan, and with a definite object in view. Those looking forward to teaching or working in small towns or rural districts especially should bear in mind that the number of trained workers in any given department is likely to be small and the facilities limited. They should therefore use their choice of electives in acquiring knowledge or skills that will be of immediate use to them in such communities. Courses in general agriculture, animal husbandry, commercial industries, industrial arts, foods and clothing may prove to be the most beneficial as electives for such students. These are strongly recommended as electives for such teachers and workers.

REQUIRED COURSES FOR FRESHMEN AND SOPHOMORES

	<i>Hours</i>
English 211, 212, 213	15
English 220, 221, or 223	5
Foreign language (one language)	10-15
Mathematics 311, 312	10
History 211, or 212, 213; 221 or 222	15
Chemistry 111, 112 or Physics 311, 312	10
Biological Science (Botany 111, Zoology 111)	10
Music and Art Appreciation	6- 9
Military Science 211, 212, 213, 221, 222, 223 (for men)	12
Physical Education, six quarters	6- 9
Orientation (Ed. 211)	1
Vocations	6-10

SAMPLE SCHEDULE

The following are typical examples of how normal schedules might be arranged. Others more in accord with the student's interest and aptitudes might be selected:

Freshmen

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Eng. 211, 212, 213	5 (5-0)	5 (5-0)	5 (5-0)
Math. 311, 312	5 (5-0)	5 (5-0)	.....
French or Spanish 211, 212, 213	5 (5-0)	5 (5-0)	5 (5-0)
Ed. 211	1 (1-0)	.....	.....
Mil. Sci. 211, 212 213	2 (3-2)	2 (3-2)	2 (3-2)
or			
Physical Education	1 (0-2)	1 (0-2)	1 (0-2)
Mus. 211, 212, 213			
or			
Art 314, 315, 316	2 (2-0)	2 (2-0)	2 (2-0)
Vocations	3 (0-6)	3 (0-6)	3 (0-6)
	<hr/>	<hr/>	<hr/>
	19	19	19

Sophomores

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Eng. 223, 220, 221	5 (5-0)	5 (5-0)	5 (5-0)
Chem. 111, 112			
or			
Phy. 311, 312	5 (3-4)	5 (3-4)	.....
Bot. 111	5 (3-4)	.....	.....
Zool. 111 .....	.....	5 (3-4)	.....
Math. 313 .....	.....	.....	5 (5-0)
Mil. Sci. 221, 222, 223	2 (3-2)	2 (3-2)	2 (3-2)
or			
Physical Education	1 (0-2)	1 (0-2)	1 (0-2)
Mus. 221, 222, 223			
or			
Art 327, 328, 329	2 (2-0)	2 (2-0)	2 (2-0)
History .....	.....	5 (5-0)	5 (5-0)
Educ. 221 .....	.....	.....	5 (5-0)
French or Spanish	5 (5-0)	.....	.....
	<hr/>	<hr/>	<hr/>
	19	19	19

COURSES PRELIMINARY TO ADMISSION TO MEDICAL COLLEGE

This institution has been rated as class "A" by the American Medical Association as to qualifications for giving pre-medical training. Students completing the prescribed course will be required to pass the national medical school admission test and the graduate record examination.

All students planning to study medicine are urged, therefore, to complete the four-year course and receive their degree before entering a medical school.

PRE-MEDICAL COURSE

Students are advised to select subjects in college which assure a broad background for later medical study rather than merely confirming themselves to courses and fields required in the medical curriculum. Electives should include psychology, political science, history, economics, sociology, and mathematics.

The following represent the minimum requirements in general for admission to class "A" Medical Schools:

	<i>Quarter Hours</i>
*Chemistry (inorganic)	15
Chemistry (organic)	10
Physics	15
Biology	12
English (composition and literature)	15
A modern foreign language (a reading knowledge)	12
Electives	10-18

OPPORTUNITIES FOR WOMEN

All courses in the College are open to women on the same basis as men. There is a great demand for well-trained women not only as teachers but in practically all fields of endeavor. Accordingly, women registering in the teacher training division may, with approval of their advisers, select courses in any other division or department of the institution.

The aim of this division is to give the women as well as the men every opportunity to take full advantage of all the facilities of the College in developing the best and most comprehensive education possible.

*Pre-medical students and majors or minors in Chemistry should register for Chemistry 111, 112, and 113 in successive quarters.

GRADUATE SCHOOL

F. A. WILLIAMS, *Dean*

The Agricultural and Technical College of North Carolina is a Land-Grant institution. Consequently as would be expected its Graduate School offers to qualified students the opportunity to pursue and to undertake research in the areas of functional education as related to Agriculture, Technology, Applied Sciences, and allied areas of study.

The immediate aims of the graduate program differ from those of undergraduate study. Hence, the college seeks to enable graduate students (1) to broaden their knowledge of a given area of study, (2) to increase their competence in a chosen area of study, (3) to develop power and interest in self-improvement, (4) to become imbued with a true spirit of research, and (5) to become widely read in those fields related to their area of study.

In order to accomplish these aims the college desires to provide instruction and research to as wide a constituency as possible.

The office of the Graduate School is located in Room 101, Noble Hall. The office is open from 8:00 a. m. to 5:00 p. m. daily, except Saturday. On Saturday, it is open from 8:00 to 12:00 m.

All communications and inquiries regarding matters connected with the Graduate School, whether from prospective students or from those whose work is in progress, should be directed to the Office of the Graduate School and/or the College Registrar.

GRADUATE OFFERINGS

The college was authorized by the North Carolina Legislature in 1937 to offer to qualified graduate students the opportunity to pursue graduate work in Agriculture, Technical and Applied Sciences. The courses offered in these areas at the present lead to both the Master of Science degree and a Master's teaching certificate in Agricultural Education, Industrial Education and Rural Education at the elementary and secondary levels. In addition to these regularly established programs of graduate studies, other specialties in agriculture, technical and applied sciences may be pursued with the approval of the Graduate School.

ORGANIZATION

The Graduate School is under the administration of the Dean of the Graduate School, the Graduate Executive Committee, the Graduate Council, the Thesis Committee, and Examining Committees. The reports of these committees are subject to the approval of the College Council which is the policy making body of the college with the approval of the Board of Trustees.

ADMISSION

An applicant from the Agricultural and Technical College of North Carolina or from an accredited college or university requiring substantially the same undergraduate program as is required at this college, may be admitted to full graduate standing pending approval for candidacy. The applicant's undergraduate grades should be above average.

A student with relatively low grades on his undergraduate record from any institution will be assessed an entrance penalty of from six to nine quarter hours. Application for admission to graduate standing and a transcript of the applicant's undergraduate record must be submitted to and approved by the Registrar in advance of registration. Admission to graduate standing does not admit a student either to a particular major or to candidacy for the Master's degree.

Full Standing: For admission to graduate study in full standing the applicant must meet the following requirements:

1. Graduation from an institution whose requirements for the bachelor's degree are substantially equivalent to those of the Agricultural and Technical College.
2. An undergraduate grade average of "B" in the junior and senior years.
3. Undergraduate training in the subject matter of the field, in which the applicant expects to take graduate work, substantially equivalent to the requirement for undergraduate students in the same field at this College. This will be construed to mean that training in closely related or supporting subjects must also be adequate to carry on advanced study in the field of the applicant's choice.

Provisional or Temporary Standing: The applicant who does not meet all the requirements for admission to full standing in the Graduate School may be admitted to provisional or temporary standing. Such admission will be based on written application, setting forth the circumstances involved, and with the approval of the College Registrar and the Dean of the Graduate School. The student will be advised of any deficiencies or other conditions to be met to attain full standing.

The student admitted to provisional or temporary standing shall be admitted to full standing upon meeting the following requirements:

1. The completion of at least 15 hours of work for graduate credit with a grade of B or better in three-fourths of such graduate work.
2. The removal of any course or subject-matter deficiencies which were specified at the time of his admission to Provisional Standing in the Graduate School.

Admission to graduate study does not imply admission to candidacy for an advanced degree. Such candidacy is determined after the student has demonstrated that he has ability to do work of graduate rank as shown in the passing of a qualifying examination.

VETERANS' ADMISSION

The United States Veterans Administration has approved the Agricultural and Technical College of North Carolina as an institution for training under Public Law 16—Vocational Rehabilitation Act and Public Law 346—the Service Men's Readjustment Act of 1944 (G. I. Bill of Rights). The College, accordingly, encourages the enrollment of demobilized students and offers its facilities to those qualified for attendance to the full extent of its accommodations in its Graduate School. The rules for admission and continued registration for demobilized students are, in general, the same as those operative for other students.

REGISTRATION AND ASSIGNMENT

Students who have been admitted to full-time graduate study, register, obtain their assignments from the Dean of the Graduate School, and pay their fees during the regular registration periods.

Not more than fifteen quarter hours, including research, may be assigned in a single quarter, nor more than nine quarter hours during a single summer session. An in-service or part-time student follows the same procedure as a full-time student.

REQUIREMENTS FOR THE MASTER'S DEGREE

The requirements for the Master's degree are:

- (1) Forty-five (45) quarter hours including three (3) hours for a thesis.
- (2) The successfully passing of a qualifying examination.
- (3) Approval of a proposed thesis.
- (4) A cumulative average of 2 or more grade points.
- (5) Passing of a final examination in subject matter and thesis.
- (6) Preparation of an abstract of the thesis.
- (7) A minimum residence of one year.

Residence Requirements: The minimum requirements of candidates for the Master's degree is one academic year. Most times a longer period of residence will prove necessary.

Not more than three quarter hours of credit toward the Master's degree may be given for acceptable graduate work completed elsewhere. Such credit cannot therefore shorten the minimum period of full-time residence work required at the Agricultural and Technical College of North Carolina. No credit is given toward an advanced degree through

extension or correspondence courses. However the Graduate School does conduct regular classes in the evenings and on Saturdays for which graduate credit is granted.

All work offered for the Master's degree, whether in the regular academic year or in the Summer Session, must be completed within a period of six years from the time the graduate program is started.

Program of Study: At the time of admission to the Graduate School the student, on the advice of the Dean, is assigned to an adviser who advises him throughout his course. The choice of an adviser is largely determined by the student's choice of a major subject or field.

The program of study may consist of courses chosen from one department or it may include such cognate courses from other departments as may in individual instances seem to offer greatest immediate and permanent values. As a general principle two-thirds of the courses come from the major field.

Under ordinary circumstances graduate programs, including electives or undergraduate courses, are limited to 15 hours for any one quarter.

Admission to Candidacy: To become admitted to candidacy for a degree, a student must have been unconditionally admitted to graduate standing, and must have been approved by his adviser and the Dean of the Graduate School for his particular area of study. Candidacy is based on an examination of the student's undergraduate record, and the passing of a qualifying examination. The minimum prerequisite is 15 quarter hours over and above any entrance deficiencies or penalties. All arrangements and agreements are tentative until the student has been admitted to candidacy for a degree.

Thesis: The Master's thesis is intended to demonstrate the student's ability to discover a problem, collect, arrange, interpret and report pertinent data or material on a special problem. A publishable contribution is highly desirable. Hence the thesis is expected to exhibit insight into the thesorial problem and competence in the use of appropriate English, and scholarly methods.

Abstract: A candidate for the Master's degree is required to prepare an abstract of the thesis to the final examination before being admitted. The abstract should not be more than five hundred (500) words in length.

Final Examination: Each candidate for the Master's degree is required to appear before an examining committee and exhibit his fitness to receive a Master's degree for a period of two hours in length. This examination will cover the candidate's thesis and major field.

NON-DEGREE ENROLLMENT

Graduate work may be taken by students who are not candidates for a Master's degree. Such enrollment permits the special privilege of a wider range in the selection of subjects. The courses selected should, however, bear an appropriate relation to one another. A statement of the subjects must be submitted to the Dean of the Graduate School. Admission for such study is based upon the same requirements as prospective candidates for the Master's degree.

GRADING SYSTEM

The work of graduate students performed in connection with research work and the thesis should be reported as "P" indicating progress until the work has been completed when a final grade is assigned. All other work is reported as "A" Excellent, "B" Good, and "C" Average. A grade below "C" is not accepted for graduate credit. Should a candidate receive three grades below "C" the Dean of the Graduate School may request that the student discontinue graduate work.

WITHDRAWAL FROM THE COLLEGE

A graduate student who desires to withdraw from the College must apply to the Dean of the Graduate School for permission to withdraw in good standing. If the student leaves the College at any time during the Quarter, without communicating with the Dean, he will be marked as having failed in all of his courses for the Quarter. No withdrawal from the College will be permitted after two weeks prior to the beginning of final examinations.

The written permission of the Dean shall be filed with the Registrar at once by the student in order that the proper entry may be made upon the College record.

COLLEGE SENIORS

Regularly enrolled seniors who lack not more than six quarter hours to meet requirements for graduation may register for additional courses to complete a normal schedule, in the Graduate School. Such additional courses may be counted towards the Master's Degree, after the Bachelor's Degree has been granted, but they will not be counted for meeting requirements for both the Bachelor's and the Master's Degree.

COLLEGE STAFF AND GRADUATE WORK

Full-time members of the college staff with the president's approval may be permitted to register for not more than three hours, or one course, per quarter in the Graduate School, provided such would not interfere with their regular College duties.

RESPONSIBILITY OF GRADUATE STUDENTS

The responsibility of course enrollment rests entirely upon the student. He should read the regulations carefully, and should follow them in all matters.

Members of the faculty are always ready to advise the student, and assist in planning his study program, but they are not responsible for enforcing the regulations of the Graduate School.

GRADUATE COURSES DURING THE SUMMER

The College offers opportunities to pursue regular graduate courses leading toward the Master's degree during the summer in connection with the Summer School. Details regarding courses offered, facilities for study, environment, etc., may be found in the Summer School Catalogue, a copy of which is available upon request to the Director of the Summer School.

FEEES

Full-time Graduate Students: Full-time graduate students pay the same fees as undergraduate students.

Part-time Graduate Students: Part-time graduate students pursuing less than 13 hours pay \$3.00 per hour credit in addition to the following fees:

- (a) Library Fee—\$3.00 plus a \$2.00 refundable fee of \$2.00. (Total—\$5.00).
- (b) Laboratory fee (if any).
- (c) Identification card—\$.50.
- (d) Medical fee—\$3.00.
- (e) First matriculating fee—\$5.00.

A late registration fee of \$3.00 is assessed against a full-time graduate student who registers after the close of the regular period of registration. The same fee is charged part-time graduate students who register after the second day set for their registration.

Commencement Fees: Before receiving a Master's degree, students must pay a commencement fee of \$25.00 to cover cost of diploma, thesis binding, and other commencement expenses, including cap, gown and hood. This fee should be paid in February prior to the date the degree is expected to be conferred.

HOUSING

The college provides housing accommodations for a limited number of graduate students. Information on housing for female students will be furnished by the Dean of Women. Requests for information on housing for male students should be directed to the Dean of Men.

Mature graduate students are able to obtain rooms at a reasonable rate in private homes relatively near the college. Prospective graduate students who are married and desire housing should contact either the Deans of Men and Women or the Graduate Office.

COURSE ANNOUNCEMENTS

The quarter in which a course is to be offered will be found in the regular college schedule of courses. The college reserves the right to discontinue any course for which the registration is not sufficiently large. As would be expected, at the graduate level, student demands frequently make it necessary to vary course offerings made in advance.

SPECIAL GRADUATE CERTIFICATION REQUIREMENTS AT THE MASTER'S LEVEL

North Carolina State Department of Public Instruction has issued the following requirements to be followed by those who desire to obtain a Master's degree and also a state graduate teaching certificate. A brief summary of these requirements follows:

I. Graduate Teacher's Certificate In Agricultural Education:

- A. Hold or be qualified to hold the Class A teacher's certificate in Secondary Agricultural Education.
- B. Have at least three years' teaching experience.
- C. Have a Master's degree from an institution of higher learning with recognized graduate standards approved by the State Department of Public Instruction.
- D. The distribution of the Course work will include:
 1. Agricultural Education18 quarter hours
 2. Technical Agriculture18 quarter hours
(Including Agronomy, Horticulture, Poultry, etc.)
 3. Thesis and Electives 9 quarter hours

II. Graduate Teacher's Certificate In Industrial Education:

1. Required courses
 - Ed. 601. Theory of American Public Education..Credit 3(3-0)
 - Ed. 605. Principles of Teaching..... Credit 3(3-0)
 - Ed. 606. The CurriculumCredit 3(3-0)
 - Ed. 612. Techniques and Methods of Research...Credit 3(3-0)
 - Ed. 621. Educational PsychologyCredit 3(3-0)
 - Ed. 622. Measurements and EvaluationCredit 3(3-0)
 - Guid. 601. The Field of Guidance.....Credit 3(3-0)
2. Subject-matter courses according to certificate.....18 Q.H.
3. Thesis and Electives 6 Q.H.

Subject-Matter Courses In Industrial Education:

Hist. 504. Economic and Industrial History of the United States

or

Hist. 505.

602. Current Problems in Industrial Education

603. Industrial Psychology

604. Supervision and Administration in Industrial Education

605. Time and Motion Study

606. Research Problems in Industrial Education

620. Co-operative Training

624. Laboratory Planning for Industrial Shops

631. General Industrial Education Programs

632. Seminar in Industrial Education

634. Workshop in Industrial Education

III. Graduate Secondary Teacher's Certificate:

A. Hold or be qualified to hold the Class A high school teacher's certificate.

B. Have three or more years' teaching experience.

C. Have a Master's degree from an institution of higher learning with recognized graduate standards approved by the State Department of Public Instruction. This would include:

1. Subject matter in the certificate fields.....12 S.H.
2. Education (philosophy, principles, curriculum, psychology, etc.) 6 S.H.
3. Electives12 S.H.

IV. Graduate Elementary Certificate:

A. Hold or be qualified to hold the Class A primary or grammar grade certificate.

B. Have three or more years' teaching experience.

C. Have a Master's degree from an institution of higher learning with recognized graduate standards approved by the State Department of Public Instruction. This credit would include:

1. Academic work 6-12 S.H.
This should include subject matter in those fields in which there are manifest weaknesses in the equipment of the individual, as well as subject matter that would strengthen points already strong.
2. Education (philosophy, principles, curriculum psychology, etc.) 6 .H.
3. Electives12-18 S.H.

Requirements for Principal's Certificate, effective as of July 1, 1943:

- A. Hold or be qualified to hold the Class A teacher's certificate (secondary or elementary).
- B. Have three years' teaching experience within the past five years.
- C. Hold a Master's degree from an institution of higher learning with recognized graduate standards approved by the State Department of Public Instruction.
- D. Have credit for a minimum of 12 semester hours (18 recommended) of graduate work in Education selected from the following areas:
 - 1. Fundamental Bases of Education
 - a. The Curriculum, at least 2 semester hours required
 - b. Human Growth and Development
 - c. Social Foundations of Education
 - 2. Instructional and Supervisory Techniques
 - a. Principles of Supervision, at least 2 semester hours required
 - b. Teaching Procedures
 - c. Guidance and Pupil Personnel and Accounting
 - d. Measurements
 - 3. Organization and Administration
 - a. High School Administration, at least 2 semester hours required
 - b. Elementary School Administration, at least 2 semester hours required
 - c. General Administration
 - d. School Plant
 - e. Staff Personnel
 - f. Community Relations
- E. Electives12-18 semester hours
This elective credit may be of the candidate's choice, subject to such requirements as the institution may have for the Master's degree, but it should be designed primarily to add to one's skill as a teacher.

GRADUATE PROGRAM IN EDUCATION FOR TEACHERS AND PRINCIPALS

The program is designed especially for persons who are interested in some phase of educational, industrial, social or government work and is organized so that one may complete the North Carolina requirements for the graduate certificate and the Master of Science degree simultaneously.

The program is flexible and will permit sufficient concentration in a given subject matter field to qualify for certification thus making it possible to secure teaching certificates in several fields.

The following is the general program to be pursued by graduate students to qualify for a teaching certificate:

A. For teaching certificates

1. Required courses

Ed. 601. American Public Education	3 Q.H.
Ed. 622. Measurements and Evaluation	3 Q.H.
Ed. 612. Techniques of Research	3 Q.H.
Guid. 601. Field of Guidance	3 Q.H.
Ed. 621. Education Psychology	3 Q.H.
Ed. 605. Teaching	3 Q.H.
Ed. 606. Curriculum	3 Q.H.

2. Subject-Matter courses according to certificate.....9-18 Q.H.

3. Thesis and Electives9-18 Q.H.

B. For Principals and Supervisors

1. Required courses

Ed. 601. American Public Education	3 Q.H.
Ed. 622. Measurements and Evaluation	3 Q.H.
Ed. 612. Techniques of Research	3 Q.H.
Ed. 605. Teaching	3 Q.H.
Ed. 606. Curriculum	3 Q.H.
Ed. 609. School Planning	3 Q.H.
Ed. 626. H. S. Administration	3 Q.H.
Ed. 627. H. S. Supervision	3 Q.H.
Ed. 624. Elem. Sch. Administration	3 Q.H.
Ed. 625. Elem Sch. Supervision	3 Q.H.
Guid. 601. Field of Guidance	3 Q.H.
Social Science	3 Q.H.

2. Electives and Thesis 9 Q.H.

Graduate programs in certain other graduate areas will be outlined, on request, by Major Professor of the area concerned and the Dean of the Graduate School.

IV. Counselor's Graduate Certificate:

- A. Hold or be qualified to hold a Class A Teacher's Certificate
- B. Have at least 3 years' of successful teaching experience
- C. Have the time equivalent of at least one year of occupational experience in one or more wage earning jobs other than teaching or counseling

D. A Master's degree in the professional field of guidance to include:

1. A minimum of 18 semester hours of professional courses distributed among the following areas:

Principles of Guidance*

Analysis of the Individual

Counseling Techniques

Occupational and Educational Information

Administrative Relationship of the Guidance Program

Supervised Practicum

2. 12 hours of work distributed among related courses in the areas of education, economics, psychology, and sociology.
3. Completion of a satisfactory thesis.

*May be taken at the undergraduate level.

DESCRIPTION OF COURSES

DEPARTMENT OF AGRICULTURAL AND HOME ECONOMICS EDUCATION

The Department of Agricultural and Home Economics Education offers professional courses in agricultural education, home economics education, including nursery school education, and Cooperative Agricultural and Home Economics Extension Work.

The Department offers curricula leading to the degree of Bachelor of Science in Agricultural Education, and service courses designed for the curricula in (1) Home Economics Education, and (2) Nursery School Education—(to be conducted jointly with the Department of Home Economics).

Students who plan to major in Agricultural Education should follow the Basic Curriculum in Agriculture for the freshman and sophomore years; those majoring in Home Economics Education and Nursery School Education should follow the Basic Curriculum in Home Economics for the freshman and sophomore years. The Head of the Department and faculty will assist the student in planning a program for the junior and senior years.

AGRICULTURAL EDUCATION

141. Materials and Methods of Teaching Vocational Agriculture

Principles of teaching as applied to vocational agriculture; making lesson plans, and other teaching devices to meet community needs. Prerequisite: Education 231 and 247. Credit 5(5-0).

142. Observation and Directed Practice Teaching

Students will be required to spend eight weeks in an approved training center in observation and directed practice teaching. Credit 5 hours.

143. Problems in Teaching Vocational Agriculture

Discovery and analysis of problems in the field, program building and evaluation of instruction. Prerequisite: Agr. Ed. 142. Credit 5(5-0).

ADVANCED UNDERGRADUATES AND GRADUATES

500. The Use of Audio-Visual Aids in Teaching Vocational Agriculture

The use of charts, slides, film-strips, motion pictures, demonstrations, field trips, radios and other teaching aids for specific teaching situations. Special emphasis is placed on making preparation for and developing techniques in using and evaluating audio-visual aids. Credit 3(2-2).

501. Evening School and Part-Time Work

Principles and problems of setting up and directing adult groups and out-of-school groups with emphasis on collecting and arranging materials for evening-class instruction. Credit 3(3-0).

501a. Teaching Out-of-School Groups

Methods and materials used in teaching young farmers and adult groups. Course includes developing various teaching devices and aids for instructing out-of-school groups. Prerequisite: Education 223, 231, 233, and 237. Credit 3(3-0).

501b. Teaching Out-of-School Groups

Organizing, planning and teaching young farmers and adult classes; including working with community committees and organizations and evaluating the outcomes with such groups. Prerequisite: Education 501a. Credit 3(3-0).

502. Problem Teaching in Vocational Agriculture

Setting up problems for teaching unit courses in vocational agriculture. Credit 3(3-0).

503. The New Farmers of America

The practices and procedures of setting up local, district and state organizations. Emphasis will be given to training officers and members. Credit 3(3-0).

504. The Principles of Agricultural Education

Consideration of the principles and practices in agricultural education in keeping with research and new trends. Credit 3(3-0).

505. Guidance and Group Instructions

Group instructions applied to agricultural occupations, guidance and counseling with special reference to pupils in vocational agriculture. Credit 3(3-0).

Graduates Only

601. Administration and Supervision

Administrative and supervisory problems of vocational agriculture, the practices and policies of local, state and federal agencies dealing with administration and supervision of vocational agriculture. Credit 3(3-0).

602. Curriculum Construction in Vocational Agriculture

Building unit courses in vocational agriculture and selecting subject matter to use with the course along with the common problems of evaluating the content of the course. Credit 3(3-0).

604. Community Problems in Agriculture

Finding the common problems of the community that relate to agriculture and developing solutions. Credit 3(3-0).

605. Public Relations in Agriculture

This course deals with the means and methods of promoting and publicizing local programs in agriculture. The use of the press, radio and other devices is emphasized. Credit 3(3-0).

606. Research in Vocational Education

Research problems developed under the supervision of some member of the staff. Credit 3(3-0).

HOME ECONOMICS EDUCATION**111. Orientation Course**

This course is concerned with aiding in the solution of the immediate problems of personal and group living as the freshmen girls find them at college. Credit 2(2-0).

130. Play and Play Materials

Play and its importance in the development of young children; evaluation of play materials for school and home. Credit 2(2-0).

135. Observation in Nursery School

Observation and evaluation of nursery school programs, play activities, and teaching methods. Credit 3(1-4).

143. Nursery School Education

Mental and social growth of the young child; observational reports and child guidance. Credit 4(2-2).

144. Nursery School Practice Teaching

Directed nursery school training, practice in planning menus, buying equipment and supplies, and general management of nursery schools. Credit 5(0-10).

152. Methods of Teaching Home Economics

Aims and philosophy of education, methods of teaching, and means of evaluating learning. Organization of general home economics from elementary through high school. Credit 5(5-0).

153. Observation and Directed Practice Teaching

Practice in selection, evaluation, and use of materials and methods in teaching situations; 30 hours of observation and 60 hours of directed teaching are required. Credit 5.

ADVANCED UNDERGRADUATES OR GRADUATES**501. Problems in Home Economics**

Individualized work on special problems. Credit 3 hours.

502. Nutrition Education

A course designed to assist elementary and secondary school teachers in the development of school and community nutrition education programs. Credit 3(2-2).

AGRICULTURAL AND HOME ECONOMICS EXTENSIONS**141. Principles of Extension Education**

Background, development, and organization of the Agricultural and Home Economics Extension Service; principles underlying extension education; program building and techniques of teaching. Credit 3(3-0).

DEPARTMENT OF AGRICULTURAL ECONOMICS

The Department of Agricultural Economics offers courses in farm management, agricultural marketing, agricultural finance, agricultural statistics, land economics, agricultural policy, agricultural prices, and rural sociology.

The Department offers curricula leading to the degree of Bachelor of Science in (1) Agricultural Marketing, (2) Farm Management, and (3) General Agricultural Economics.

Students who wish to major in this Department should follow the Basic Curriculum in Agriculture for the freshmen and sophomore years (see page 57). The Head of the Department and faculty will assist the student in planning his program for the junior and senior years.

122. Introduction to Agricultural Economics

The application of the fundamental principles of economics to agricultural production; the marketing of farm products; farm credit; land tenure and related economic problems of the farmer. Prerequisite: Economics 231. Credit 3(2-2).

123. Farm Management

Fundamental principles of farm organization and management. Enterprise selection, size of business, budgeting, farm work programs, farm analysis, leases, layout and general managerial problems. Prerequisite: Ag. Econ. 122. Credit (3-0).

131. Marketing Agricultural Products

Fundamental principles and practices of marketing as applied to farm products; marketing cost; an appraisal of marketing methods. Prerequisite: Ag. Econ. 122. Credit (5-0).

132. Agricultural Statistics

Elementary statistical methods as applied to all areas of agriculture, and an introduction to the use of calculating machines. Credit 3(2-2).

141. Farm Records

Methods and practices employed in taking farm inventories, keeping records and accounts on the farm; receipts and expenses, preparing financial statements, analysis and interpretation of results obtained from farm transactions. Credit 3(2-2).

142. Agricultural Finance

Farm credit needs; the classification of farm credits; an analysis of the Farm Credit Administration and other credit agencies and institutions. Credit (3-0).

145. Land Economics

Land as a factor of production; classification and use of rural land; tenure policies; public interest in a land policy, including settlement, credit, etc. Credit 3(3-0).

146. Land Income

Economics of land use, theories of rent, principles of land evaluation and taxation. 2(2-0).

147. Agricultural Cooperation

Principles and problems of organization, management, and supervision of cooperative endeavors of farmers in buying and selling, and service associations. Credit 3(3-0).

148. Agricultural Legislation

An analysis of legislation and regulations of federal, state and local levels affecting the farm business. The effects of such legislation upon agriculture. Credit 3(3-0).

149. Southern Resources

Population, agriculture, transportation, industry, wealth, social areas, etc. of the South, and particularly North Carolina. It also includes the formulation of solutions for economic and social problems. Credit 3(3-0).

150. Farmer Movements

A study of the history, development and programs of the major farm organizations in the United States; present and past. Credit 2(2-0).

Advanced Undergraduates and Graduates**501. Advanced Agricultural Statistics**

Advanced statistical methods as applied to agriculture; special consideration will be given to index numbers, tabulation of numerical data,

graphic presentation, analysis and interpretation of statistical data, and the formulation of agricultural problems for study. Prerequisite: Ag. Econ. 132. Credit 3(2-2).

502. Agricultural Policies

The formulation and impact of public policy on agriculture; the importance of agriculture in the national and international economy; past, present and proposed agricultural programs and policies. Credit 3(3-0).

503. Farm Cost Accounts

A study of records needed to determine the profits of various agricultural enterprises; how to set up and keep these accounts; interpretation of results, and their specific use in farm management. Credit 3(2-2).

504. Land Appraisal

Factors determining land value; methods of evaluation; appraisal of farm land for specific use; for purposes of taxation, for making loans and for sale. Credit 3(3-0).

505. Agricultural Prices

Cyclical movement and seasonal variation of prices; the general price level; construction of index numbers; and control of agricultural prices. Credit 3(3-0).

506. Business Law

Fundamental principles of law as applied to business transactions of farmers; property rights; sales; negotiable documents of title; credit instruments. Credit 3(3-0).

507. Economics of Agriculture

A course designed to provide students with the tools of analysis for comprehending the problems of farm production. The evaluation of concepts of production. Credit 3(3-0).

508. Special Problems (Marketing, Farm Management and General Agricultural Economics)

This course is designed for students who desire to work out special problems in the field of agricultural economics. Consent of the chairman of the department must be obtained. Credit (3-6).

509. Advanced Farm Management

Plan, organization and management of different types of farms. Trips to nearby farms with study of organization and plans for re-organization. Credit 3(2-2).

510. Seminar in Agricultural Economics

Discussions and reports. Prerequisite: Consent of the instructor. Credit 2(2-0).

RURAL SOCIOLOGY

131. Principles of Rural Sociology

Social systems, cultural patterns and institutional arrangements of people in rural environments in relation to those of towns and cities. Credit 3(3-0).

Advanced Undergraduates and Graduates

501. Rural Social Problems

Population, education, religion, health, land tenure, parity income, farm labor and mechanization, and housing. Credit 3(3-0).

502. Rural Leadership

Opportunities and needs for rural leadership; educational and psychological requirements for various types of rural leaders. Credit 3(3-0).

503. The Rural Family

The institutional nature of the rural family, etc. role in the community including its relations to educational, religious, welfare and other community organizations. Credit 3(3-0).

504. Community Organization

Planning and organizing educational, health, recreational and religious activities for rural people. Credit 3(3-0).

505. Rural Standards of Living

Consumption behavior in the main commodity groups of our society. Credit 3(3-0).

506. Special Problem in Rural Sociology

Students will work on a problem in rural sociology under the guidance of a member of the faculty. Credit 2 to 4 hours.

DEPARTMENT OF ANIMAL INDUSTRY

Courses in Animal Industry cover the study of beef cattle, dairy cattle, swine, poultry and their products; the management of herds, flocks and studs; feeding, breeding, general sanitation, hygiene and disease of livestock and poultry; and the chemical and physiological phases of animal nutrition.

The Department offers curricula leading to the degree of Bachelor of Science in (1) Animal Husbandry, (2) Dairy Husbandry, and (3) Poultry Husbandry.

The curricula are designed to equip men as owners and managers of general farms where livestock is handled, for the more specialized

types of dairy and poultry farming, as instructors and investigators in animal industry and animal nutrition.

Students who wish to major in the Department should follow the Basic Curriculum in Agriculture for the freshmen and sophomore years (see page 55?). Programs for the junior and senior years should be planned in conference with the Head of the Department.

ANIMAL HUSBANDRY

111. Breeds of Livestock

Breeds of farm animals with reference to their origin and development. Credit 3(2-2).

122. Types and Market Classes of Livestock

The economic importance, classification and grading of cattle, sheep, swine, horses, and livestock products. Credit 3(2-2).

124. Swine Production

The place of swine in the farm program; their selection, breeding, care and management. Credit 3(2-2).

131. Anatomy and Physiology of Domestic Animals

Designed to acquaint students with gross structure and function of tissues, organs and systems of the animal. Credit 4(2-4).

132. Livestock Feeding

Principles of feeding and the composition of feeds. Practice in formulating rations for the various classes of livestock. Credit 5(3-4).

133. Diseases of Farm Animals

The common diseases of livestock with reference to causes, prevention and treatment. Credit 3(2-2).

135. Beef Production

Breeds of beef cattle, their selection, care and management. Credit 3(3-0).

142. Farm Meats

Meat production from a market standpoint with laboratory work in the slaughtering, curing, and marketing of meat products. Credit 4(2-4).

144. Livestock Judging

Special training in points of selection of farm animals. Credit 3(1-4).

Advanced Undergraduates and Graduates

501. Animal Nutrition

Metabolism of carbohydrates, fats, proteins and minerals. Net energy values and application to new theories of feeding. Credit 5(5-0).

DAIRY HUSBANDRY

123. Principles of Dairying

A study of dairy products. Credit 3(2-2).

134. Dairy Cattle and Milk Production

Breeds of dairy cattle, their development, care and management. Credit 3(2-2).

141. Dairy Management

Designs and construction of dairy buildings, problems of economical milk production, fitting and showing dairy cattle. Credit 3(1-4).

142. Market Milk

The market milk industry, milk ordinances, city milk supply, transportation, grading, pasteurizing, and bottling. Credit 3(2-2).

144. Ice Cream Making

The principles involved in the manufacturing of commercial ice cream and ices. Prerequisite: D. H. 123. Credit 3(1-4).

146. Dairy Plant Practice

Assigned practice work in the butter, milk and ice cream laboratories of the college creamery. Prerequisite: D. H. 144. Credit 2 to 6 hours.

POULTRY HUSBANDRY

111. Principles of Poultry Husbandry

The industry, origin of breeds, classification, elements of production practices, selection and improvement. Credit (3-0).

112. Poultry Production

Feeding, housing, sanitation, parasites and disease control, and the economics of production. Credit 3(2-2).

122. Incubation and Brooding

Incubation and operation of various types of incubators and brooders. The chick, its care and management through the first four weeks; economics of hatchery operation. Credit 3(2-2).

123. Turkey Production Management

History, origin, development and management of the turkey flock. Credit 3(2-2).

131. Judging and Selection of Poultry

Standard and utility judging of fowls, selection and preparation of breeds for show purposes. Credit 3(2-2).

132. Poultry Feeds and Feeding

Poultry feeds, compounding rations, feeding standards for breeding, fattening, growing and production stock, feeding appliances and practices. Credit 4(2-4).

141. Disease and Parasites

Poultry hygiene and sanitation, nature and causes of diseases, relation of management to control of disease and parasites. Credit 4(2-4).

142. Poultry Farm Management

Principles of farm management as applied to poultry, selection of farm layouts, study of records, and factors influencing returns. Credit 3(3-0).

143. Marketing Poultry Products

Methods of killing, grading, storage and marketing poultry and poultry products. Credit 3(3-0).

Advanced Undergraduates and Graduates

502. Special Problems in Poultry Husbandry

Problems in diseases, nutrition, and breeding. Credit 2-3 hrs.

DEPARTMENT OF ARCHITECTURAL ENGINEERING

The objective of the course in architectural engineering is to provide a sound training in subjects basic to the engineering design and construction of buildings.

In order that the students may acquire self-reliance, they are increasingly thrown upon their own resources as they advance from year to year.

In recognition of the many directions toward which an architectural education may guide students in this field, the Department of Architectural Engineering announces that electives in related work may be chosen by students of good standing with the approval of the Head of the Department in substitution of suggested electives.

The course of architectural engineering covers four years and leads to the degree of Bachelor of Science in Architectural Engineering.

Freshman Year

(See First Year's Curricula of Mechanic Arts, Page 60.)

Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Freehand Drawing 311, 313	3 (0-6)	.....	3 (0-6)
Perspective Drawing, A.E. 324 .....	.....	3 (0-6)	.....
General Physics 321, 322, 323	5 (3-4)	5 (3-4)	5 (3-4)
Mathematics 321, 322, 323	5 (5-0)	5 (5-0)	5 (5-0)
Arch. Design, A.E. 321, 322, 323	4 (1-8)	4 (1-8)	4 (1-8)
Military Science, M.S. 321, 322, 323	2 (2-2)	2 (2-2)	2 (2-2)
	<hr/> 19 hrs.	<hr/> 19 hrs.	<hr/> 19 hrs.

Junior Year

Mechanics, M.E. 331, 332, 333	5 (5-0)	5 (5-0)	5 (5-0)
Arch. Design, A.E. 331, 332, 333	5 (0-10)	5 (0-10)	5 (0-10)
History of Arch., Art 324, 325, 326	4 (4-0)	4 (4-0)	4 (4-0)
Heating and Ventilating, M.E. 334, 335....	3 (0-6)	3 (3-0)	.....
Working Drawings, A.E. 334, 335, 336....	3 (0-6)	3 (0-6)	3 (0-6)
Materials of Constr., I.A. 324 .....	.....	.....	3 (3-0)
	<hr/> 20 hrs.	<hr/> 20 hrs.	<hr/> 20 hrs.

Senior Year

Struct. Design in Steel, A.E. 341, 342, 343..	5 (0-10)	5 (0-10)	5 (0-10)
Reinforced Concrete Design, A.E. 345.....	.....	.....	4 (4-0)
Arch. Practice, A.E. 346 .....	.....	2 (4-0)	.....
Surveying Math. 324 .....	.....	.....	3 (1-4)
Contract and Specifications, M.E. 327.....	.....	.....	3 (3-0)
Testing Materials, M.E. 346	2 (0-4)	.....	.....
Economics 231, 234	5 (5-0)	5 (5-0)	.....
Electives	5 hrs.	5 hrs.	5 hrs.
	<hr/> 17 hrs.	<hr/> 17 hrs.	<hr/> 20 hrs.

Suggested Electives

French
English

Commercial Law 335
Electric Wiring, I.A. 326

COURSES IN ARCHITECTURAL ENGINEERING

321. Design

Problems are given in architectural design of small domestic buildings. Prerequisite: M.E. 312. Credit 4(1-8).

322. Design

Modeling of small buildings and landscaping is offered. Prerequisite: A. E. 321. Credit 4(1-8).

323. Design

Advanced domestic buildings requiring the elements of planning for multiple uses, such as flats and apartments. Prerequisite: 322. Credit 4(1-8).

324. Perspective

Drafting principles of architectural perspective in parallel, angular, and aerial views are offered. Prerequisite: M. E. 324. Credit 3(0-6).

331. Design, Laboratory Work

A series of problems in architectural composition and structural details is offered. Prerequisite: A. E. 323. Credit 5(0-10).

332. Design, Laboratory Work

This course is a continuation of 331 emphasizing the design of small public buildings such as stores and cafeterias. Prerequisite: A. E. 331. Credit 5(0-10).

333. Design, Laboratory Work

A continuation of 332. Designs of department stores and bank buildings. Prerequisite: A. E. 331. Credit 5(0-10).

334. Working Drawings

Analyzing and drawing of architectural and structural engineering details. Prerequisite: A. E. 333. Credit 3(0-6).

335. Timber Construction

This course deals with the fundamentals of Construction as it applies to Building with emphasis being placed on drawing of details. The economical use of timber construction, such as Girder roof and Laminated Members. Prerequisite: 334. Credit 3(0-6).

336. Masonry Construction

Footing foundation and walls are treated in this course. Various types of footings for building foundations and wall construction are studied. Prerequisite: 335. Credit 3(0-6).

340. Structures

A course in which is grouped the analytical and graphical determination of stresses in framed structures. Prerequisite: M. E. 333. Credit 5(5-0).

341. Laboratory Work with Individual Criticism

Industrial engineering designs are studied. Studying structural details such as, plate girder and simple roof trusses of wood and steel. Prerequisite: A. E. 333. Credit 5(0-10).

342. Laboratory Work with Individual Criticism

This course involves the selection of the design and presentation of a special project selected by the instructor. Prerequisite: A. E. 341. Credit 5(0-10).

343. Laboratory Work with Individual Criticism

A collaborative problem is assigned. This involves the selection of the design and presentation of a special project selected by the instructor. Prerequisite: A. E. 342. Credit 5(0-10).

345. Concrete Design

Lecture and recitation, theory and design of reinforced concrete as applied to columns, beams and slabs for commercial buildings. Prerequisite: A. E. 336. Credit 4(3-2).

346. Architectural Practice

A study of procedure in architectural practice. Seminar. Prerequisite: A. E. 343. Credit 2(2-0).

DEPARTMENT OF BIOLOGY

The courses in the Biology Department are designed to serve the needs of the college as a whole in the area of Biological Sciences. In view of this concept, the courses are organized to provide the training necessary for specialization in Agricultural Sciences and Technology, Home Economics, Conservation, Horticulture and Teaching of Biology. The department also offers courses required for entrance into graduate, medical, dental and veterinary schools.

A minimum of 45 quarter hours are required of students who plan to do their major work in Biological Sciences. These hours must be satisfied from the following courses: Zoology 111, 112; Botany 111; Zoology 123, 124, 132, 143, 144 and eight hours of electives from courses permitting major credit.

Required supporting courses are: General Chemistry 111, 112, 113; Organic Chemistry, 131, 132, Physics 311, 312, 313; and Mathematics 311, 312.

Students planning a vocation in teaching, but whose major emphasis is in Biology, should consult the Head of the Department before registering. The selection and sequence of the courses are to be determined by the Head of the Department.

BACTERIOLOGY

123. General Bacteriology

Preparation of culture media, isolation and morphology of common types of bacteria, yeasts and molds; fermentation, relation of bacteria to health and principles of disinfection and sterilization. Credit 5(3-4).

132. Agricultural Bacteriology

Biological changes produced in animal and plant products with emphasis on micro-biological activities in soils in relation to soil fertility, and fermentation in dairy products. Credit 5(3-4).

BOTANY**111. General Botany**

Plants as living organisms constituting an integrated part of man's environment. General plant structure, general classification, evolutionary tendencies and living processes. Credit 5(3-4).

112. Plant Taxonomy

The systematic organization of the plant kingdom. Emphasis on identification and classification of important plant genera and families. Credit 5(3-4).

121. Elementary Plant Physiology

The relationship between plant structure and various physiological processes. A general consideration of absorption, nutrition, respiration, growth and reproduction. Credit 3(2-2).

131. Plant Physiology

An analysis of complex living processes occurring in plants and an attempt to explain them in terms of chemistry and physics. Credit 4(2-4).

133. Plant Pathology

Basic factors governing the development of plant diseases including host-parasite relationships, effect of environment on disease development and the nature of disease resistance. Credit 3(2-2).

141. Cytology

The structure and functional organization of protoplasm and its relationship to metabolism, heredity and evolution. Credit 3(1-4).

Advanced Undergraduates and Graduates**504. Special Problems in Botany**

Open to advanced students in botany for investigation of specific problems. Credit 2 to 5.

GENERAL SCIENCE**131. The Physical Sciences**

Brief review of the basic concepts of astronomy, geology, meteorology, physics and chemistry. Credit 5(4-2).

132. The Biological Sciences

Brief review of general biology, anatomy, physiology, and ecology. Credit 5(4-2).

ZOOLOGY**111. General Zoology**

Brief survey of the animal kingdom; classification, morphology and physiology of representative groups of organisms from the protozoa through metazoa. Ecological relationship of animals. Credit 5(3-4).

112. General Zoology

This course is a continuation of General Zoology 111 designed for the more basic training required of Biology majors. It is required of all majors with their concentration in Zoology. Credit 5(3-4).

122. Invertebrate Zoology

A comprehensive consideration of the morphology, function, phylogeny, classification and the life histories of representative forms of lower and higher invertebrate groups exclusive of insects. Prerequisite: Zoology 111 and 112 or equivalent. Credit 5(3-4).

123. Comparative Anatomy of Vertebrates

Structural development from primitive chordates through vertebrates; with emphasis on higher vertebrates. Prerequisite: Zoology 112. Credit 5(3-4).

124. Mammalian Anatomy

Lectures and detailed laboratory dissections on the cat, foetal pig, calf and other related mammals as a basis for an understanding of human anatomy. Special emphasis is placed on the study of the myology and osteology of the fore and hind limbs to illustrate fundamental principles of structure and function. Prerequisite: Zool. 123. Credit 4(2-4).

132. Histology

Microscopic structure of animal tissues. Prerequisite: Zool. 112. Credit 5(3-4).

133. Entomology

Morphology, identification and classification of insects; economic importance of insects. Credit 3(2-2).

134. General Microtechnique

This course is designed to develop skills in the preparation of cells, tissues and organs for microscopic observation and study. Prerequisite: Zoology 111 and 112 or equivalent. Credit 4(2-4).

142. Genetics

Principles and the mechanism of inheritance in plants and animals. Credit 3(3-0).

143. Vertebrate Embryology

A study of the developmental stages of selected vertebrates including man. The materials are treated comparatively and consist of amphibian, bird, rodent and mammalian forms. Prerequisite: Zoology 132 or special consent of instructor. Credit 4(2-4).

144. Vertebrate Embryology

This course will be utilized in part for stressing variations in rodent and mammalian development and for applications of experimental embryological procedures. Prerequisite: Zoology 143. Credit 4(2-4).

Advanced Undergraduates and Graduates**501. Special Problems in Zoology**

Open to students qualified to do research in Zoology. Credit 2 to 3 hours per quarter. Maximum 6 credit hours.

502. Mammalian Biology

The study of the evolutionary history, classification, adaptation and variation of representative mammals with special emphasis on the prenatal variations in prototherian, metatherian and eutherian type. Prerequisite Zoology 111 and Botany 111. Credit 3(2-2).

503. Biology of Sex

Lectures on the origin and development of the germ cells and gonads in selected animal types. The evolution of sexuality and sex in plants, protozoans, and lower metazoans. Some consideration is made of the influences of endocrine secretions in altering the normal sex ratio in certain undifferentiated races of amphibians. Prerequisite Zoology 111 and 112 or equivalent. Credit 3(3-0).

504. Cytology

An intensive study of the cell with lectures and periodic student reports on modern advances in cellular biology. Prerequisite 132 or special consent of instructor. Credit 2(2-0).

DEPARTMENT OF BUSINESS

During the first two years the student is expected to lay a broad foundation for later specialization. To secure this end the courses in the freshman and sophomore years have been so selected and grouped as to cover some of the major fields of knowledge pertinent to business.

The Department of Business offers 3 curricula with variations which make it possible for students to prepare for various kinds of business and teaching positions.

GRADUATION REQUIREMENTS

Candidates for the B.S. degree must complete at least 200 hours of work approved by the Dean and Faculty of the division including work done in general education. In order that graduates of the Department of Business may have specialized, as well as, broad training, the work is organized under three major departments as follows: (a) Business Administration, (2) Accounting, and (3) Commercial Education.

REQUIRED COURSES FOR FRESHMEN AND SOPHOMORES

English 211, 212, 213	15
Speech, English 224	3
Mathematics 311, 312, 315	15
Music and Art Appreciation (Comm. Ed.)	9
Music and Art Appreciation (B. A. and Acct.)	6
Physical Education	6
Chemistry 111, 112 or Physics 311, 312	10
Comm. Ed. 317, 318, 319	6
History 213, 221 or 222	10
Economics, Ec. 231, 232**	10
Business Correspondence, B. A. 339	5
Electives*	12

Students will choose electives to complete a minimum 18-hour schedule for each quarter.

ACCOUNTING

The following is suggested for those desiring to complete a major in Accounting.

This major is recommended for those contemplating a career in Accounting or graduate work in this specialized field.

REQUIRED COURSES FOR FRESHMEN AND SOPHOMORES

Accounting 321, 322, and 323 required in addition to general requirements for all Business students as previously noted.

*Men students registering for a major in the Department must satisfy the Military Science requirements.

**These courses will be taken by Accounting Majors during their Junior year.

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Business Management, B. A. 351	5 (5-0)	.....	.....
Principles of Retailing, B. A. 346 .....	.....	.....	5 (5-0)
Intermediate Accounting, Accounting 331, 332	5 (5-0)	5 (5-0)	.....
Accounting Systems, Accounting 334 .....	.....	.....	5 (5-0)
Statistics, Math. 318 .....	.....	5 (5-0)	.....
Sociology, Soc. 231	5 (5-0)	.....	.....
Personnel Administration, B. A. 353 .....	.....	.....	5 (5-0)
Economics 231, 232	5 (5-0)	5 (5-0)	5 (5-0)
Electives .....	.....	2 hrs.	2 hrs.
	20	17	17

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Office Management, B. A. 352 .....	.....	5 (5-0)	.....
Commercial Law, B. A. 335	5 (5-0)	.....	.....
Principles of Real Estate, B. A. 357	5 (5-0)	.....	.....
Insurance, B. A. 356 .....	.....	5 (5-0)	.....
Principles of Salesmanship, B. A. 337 ....	.....	.....	5 (5-0)
Accounting 335 .....	.....	.....	5 (5-0)
Advanced Accounting, Accounting 341....	5 (5-0)	.....	.....
Federal Tax Accounting, Accounting 342..	.....	5 (5-0)	.....
Auditing, Accounting 343 .....	.....	.....	5 (5-0)
Electives	3 hrs.	3 hrs.	3 hrs.
	18	18	18

MAJOR IN BUSINESS ADMINISTRATION

The following is suggested for those desiring to complete a major in the field of business administration.

This major is recommended for those planning to enter one of the practical fields of trade or industry as administrators or office workers.

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Business Management, B. A. 351	5 (5-0)	.....	.....
Principles of Retailing, B. A. 346 .....	.....	.....	5 (5-0)
Accounting 321, 322	5 (5-0)	5 (5-0)	.....
Cost Accounting 323 .....	.....	.....	5 (5-0)
Statistics, Math. 318 .....	.....	5 (5-0)	.....
Sociology, Soc. 231	5 (5-0)	.....	.....
Advertising, B. A. 345 .....	.....	5 (5-0)	.....
Economics 233 .....	.....	.....	5 (5-0)
Electives	2 hrs.	3 hrs.	3 hrs.
	18	18	18

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Office Management, B. A. 352 .....	.....	5 (5-0)	.....
Personnel Administration, B. A. 353 .....	.....	.....	5 (5-0)
Commercial Law, B. A. 335	5 (5-0)	.....	.....
Principles of Real Estate, B. A. 357	5 (5-0)	.....	.....
Insurance, B. A. 356 .....	.....	5 (5-0)	.....
Principles of Salesmanship, B. A. 337 .....	.....	.....	5 (5-0)
Labor Problems, Ec. 234 .....	.....	.....	5 (5-0)
Accounting 342	5 (5-0)	.....	.....
Electives	3 hrs.	8 hrs.	3 hrs.
	18	18	18

Suggested Electives

General Psychology	Eng. 244, 231
Accounting	Ec. 254
Education to satisfy certification requirements	

MAJOR IN COMMERCIAL EDUCATION

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Business Management, B. A. 351	5 (5-0)	.....	.....
Principles of Retailing, B. A. 346 .....	.....	.....	5 (5-0)
Accounting, Acct. 321, 322	5 (5-0)	5 (5-0)	.....
Shorthand, C. Ed. 314, 315, 316	5 (5-0)	5 (5-0)	5 (5-0)
Mathematical Statistics, Math. 318 .....	.....	.....	5 (5-0)
Adolescent Psychology, Ed. 223	3 (2-2)	.....	.....
Educational Psychology, Ed. 231 .....	.....	3 (3-0)	.....
Introduction to Guidance, Ed. 233 .....	.....	3 (2-2)	.....
Principles of Secondary Education, Ed. 237 .....	.....	3 (3-0)	.....
Introduction to Education, Ed. 222.....	.....	.....	3 (3-0)
	18	19	18

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Office Management, B. A. 352 .....	.....	5 (5-0)	.....
Commercial Law, B. A. 335	5 (5-0)	.....	.....
Secretarial Studies, C. Ed. 323 .....	.....	6 (2-8)	.....
Advanced Stenography, C. Ed. 322	5 (5-0)	.....	.....
Office Training, C. Ed. 321a, 321b	2 (2-0)	.....	6 (0-13)
Office Appliances, C. Ed. 324 .....	.....	2 (0-4)	.....
Educational Philosophy, Ed. 224	3 (3-0)	.....	.....
Methods of Teaching Com. Ed., Ed. 250....	.....	5 (5-0)	.....
Observation and Practice Teaching, Ed. 251 .....	.....	.....	5 (5-0)
Physical Education, Phy. Ed. 234	5 (5-0)	.....	.....
	19	19	11

SUGGESTED PROGRAM FOR SECRETARIES AND STENOGRAPHERS

Two-Year Course

Eng. 211, 212, 213	15 hrs.
Math. 311, 312, 315	15 hrs.
C. Ed. 314, 315, 316	15 hrs.
C. Ed. 317, 318, 319	6 hrs.
C. Ed. 321, 322, 323	19 hrs.
B. A. 339	5 hrs.
Phys. Ed.	6 hrs.
B. A. 352	5 hrs.
Electives	15 hrs.

This course is carefully planned for the purpose of training prospective candidates for various stenographic, typing, and clerical positions. Under immediate supervision students are trained to do simple routine work requiring care and accuracy in details. Special attention will be given to instruction in preparation for Civil Service examinations.

COURSES IN ACCOUNTING, BUSINESS ADMINISTRATION AND COMMERCIAL EDUCATION

Courses in Accounting

321. Introductory Accounting (Formerly B.A. 332)

A study of the fundamental principles of accounting, embracing the theory of double-entry system recording and its application to business transactions through the complete accounting cycle. Credit 5(5-0).

322. Introductory Accounting (Formerly B.A. 333)

Continuation of Accounting 321. Emphasis is placed on accounting techniques as they apply to proprietorships, partnerships, and corporations. Also, an introduction is given to special corporate accounts, manufacturing and departmental operations. Prerequisite: Accounting 321. Credit 5(5-0).

323. Cost Accounting (Formerly B.A. 341)

A study of the elements and principles of cost accounting as applied to job lot, process, and standard costs systems. Emphasis is placed on accounts as a means of managerial control. Prerequisite: Accounting 321, 322. Credit 5(5-0).

331. Intermediate Accounting (Formerly B.A. 334)

This course gives advanced training in the theory of accounts, recording of accounting data, and preparation of accounting statements. Prerequisite: Accounting 321, 322, 323. Credit 5(5-0).

332. Intermediate Accounting

Continuation of Accounting 331 with emphasis on analysis and interpretation of accounting data. Prerequisite: Accounting 331. Credit 5(5-0).

334. Accounting Systems

A study of accounting features peculiar to various businesses, contractors, department stores, loan companies and associations, banks, insurance companies, brokerage firms, and utilities. Prerequisite: Accounting 321, 322, 323. Credit 5(5-0).

335. Governmental Accounting

Accounting for institutional and governmental units. Financial administration of funds, appropriations and budgets. Prerequisite: Accounting 321, 322, 323. Credit 5(5-0).

341. Advanced Accounting

Special advanced training in accounting techniques utilized in partnership accounting, special sales procedures, consolidations, fiduciary and budgetary accounting, and actuarial science. Prerequisite: Accounting 331, 322. Credit 5(5-0).

342. Federal Tax Accounting

A study of Federal income tax laws in relation to accounting and the preparation of tax returns for individuals and corporations. Prerequisite: Accounting 321, 322, 323. Credit 5(5-0).

343. Auditing (Formerly B.A. 343)

The legal responsibilities, the principles, and the practical procedure in the conduct of an audit and making an audit report. Prerequisite: Accounting 341 or concurrent enrollment therein. Credit 5(5-0).

Courses in Business Administration**335. Commercial Law**

Sales of personal property, bailment, common carriers, agency, master and servant, partnership, contracts, corporation, insurance, landlord and tenant, etc. Credit 5(5-0).

337. Principles of Salesmanship

This course is based upon actual experience of men successful in the field of salesmanship. It develops the subject from sound economics, philosophical, and psychological points of view. Economics of salesmanship is presented so that the student may see where the work performed is justifiable and necessary in the economic regime. The course includes psychology so that the student may more readily adjust himself to actual sales conditions and learn why some men and ideas succeed while others fail. Credit 5(5-0).

339. Business Correspondence

This course makes a thorough and practical analysis of all forms of business letters and gives constructive information on how to write letters that convince, whether they be sales letters, follow-up letters, form letters, complaint, collection and application letters. This course is required of all students in Business. Prerequisites: Eng. 211, 212; C. Ed. 318. Credit 5(5-0).

345. Advertising

This is a study of the techniques used in the preparation of advertising copy and the part advertising plays in business; advertising campaigns, budgets, and media. Credit 5(5-0).

346. Principles of Retailing

This course aims to cover the high points in the retail process of marketing as it is applied especially to the small independent store. Modern grocery and other smaller stores will be used as examples. Detailed studies will be made of store management, finance and control, and marketing. Credit 5(5-0).

351. Business Management

Business Management covers the fundamentals of industrial organization and operation and helps the student to gain that basic knowledge of business which should be part of the equipment of every businessman. Credit 5(5-0).

352. Office Management

This course covers the principles and methods employed in departmental and centralized offices. Special attention is given to office layout, office system, equipment, selecting workers and general office services. Credit 5(5-0).

353. Personnel Administration

This is a comprehensive course dealing with the principles and practices in the administration of employees of commercial and industrial establishments. This course is very practical, giving the student a view of personnel as the businessman sees it. Credit 5(5-0).

356. Insurance

This course is a survey in a general way of the whole field of insurance. It deals with the nature and statistical basis of different kinds of insurance as property insurance, straight life, endowment, accident, industrial, old age, fire, livestock, etc. The function of publicity and the need of educating the public in the principles and services of insurance receive much attention. Credit 5(5-0).

357. Principles of Real Estate

This course deals with real estate as a profession, classes of property—suburban, apartment, industrial, farm and resort—rentals, leasing, the work of the broker, property management and financing. Credit 5(5-0).

COURSES IN COMMERCIAL EDUCATION**314. Shorthand**

This course includes a study of wordbuilding and the general principles outlined in the Gregg Shorthand manual (simplified) and speed studies. Credit 5(5-0).

315. Shorthand

This course is a continuation of 314 and with added emphasis on transcription of simple letters and documents. Prerequisite: 314. Credit 5(5-0).

316. Shorthand

The principles are included early in this course and emphasis is placed on difficult dictation and transcription, speed tests and reporting speeches. Prerequisite: 315. Credit 5(5-0).

317. Typewriting

The typewriting course covers a working knowledge of the use of all parts of the typewriter, a thorough command of the keyboard by means of the touch system, rhythmic drills, practice in writing words, etc. Credit 2(0-5).

318. Typewriting

This course is concerned with tests and drills for speed and accuracy in the transcription of easy material from printed matter. Prerequisite: 317. Credit 2(0-5).

319. Typewriting

Technical typewriting is emphasized in this course by allowing the student to spend most of his time on tabulation, stencil cutting, report making and other practical duties. Prerequisite: 318. Credit 2(0-5).

321a, 321b. Office Training

Students will be required to do 13 hours practice work per week in the offices and plants of the College and in and around Greensboro for a period of one quarter. A study is also made of the executive work connected with offices of many types. Two hours each week are devoted to discussion of the various problems found in these offices. Prerequisite: C. Ed. 223. Credit 8(2-13). Credit, lecture alone, 2(2-0). Laboratory alone, 6(0-13).

322. Advanced Stenography

Advanced stenography is a view of principles and practices of shorthand and typewriting for the purpose of developing speed. Emphasis is put on the details of report making, taking dictation from speakers and other specialized fields of shorthand and typewriting. Open to all persons who have had Gregg shorthand. Prerequisite: C. Ed. 316, 319. Credit 5(5-0).

323. Secretarial Studies

This course deals with the qualification, duties, responsibilities and work of a secretary. The other points considered are: Managing callers, handling correspondence, locating sources of information, making appointments, and other routine and special duties in systematizing the office. Prerequisite: C. Ed 316, 319, 322. Eng. 213. Credit 6(2-8).

324. Office Appliances

The purpose of the course is to give the student a general working knowledge of the leading office machinery and equipment. Students will be instructed in the use of adding, calculating, duplicating, name and data writing, billing, miscellaneous labor-saving and bookkeeping machines. This course can be given any quarter at the discretion of the instructor. Prerequisite: C. Ed. 317. Credit 2(0-4).

DEPARTMENT OF CHEMISTRY

The Department of Chemistry offers courses required in the various curricula of the college. For the most part the courses are made up of subject matter that is organized in step-wise sequence and students should therefore take the courses in this order.

A minimum of 45 quarter hours, including general chemistry, is required for a major in Chemistry. Additional requirements in related courses include 10 quarter hours in general physics, and mathematics through integral calculus. A reading knowledge of scientific German or French is also required.

For a major in Biochemistry a minimum of 35 quarter hours in chemistry, including physical chemistry and an additional 25 quarter hours consisting of biochemistry, plant physiology and animal nutrition are required.

A student who elects Chemistry as his major should plan his program for the junior and senior years in conference with the Head of the Chemistry Department.

BIOCHEMISTRY

134. General Agricultural Biochemistry

Introductory organic chemistry with application to plant and animal life. Prerequisite: Chem. 131. Credit 5(3-6).

135. Physiological Chemistry

Composition and action of special vitamins, hormones, enzymes and minerals in metabolism. Designed especially for foods and nutrition majors and pre-medical students. Prerequisite: Biochem. 134, or permission of instructor. Credit 5(2-6).

147. General Biochemistry

Brief review of the literature and history of biochemistry; colloidal chemistry of biological materials; hydrogen ion concentration; the chemical composition of plants and animals with special reference to lipids, carbohydrates, proteins and enzymes. Prerequisite: Biochem. 135. Credit 5(5-0).

148. Official Methods of Analysis

Methods used in chemical analysis of foods and feeds as set forth by the Associations of Official Agricultural Chemists. Chemistry of the methods, and interpretation of the results of analysis of cereal foods, milk products and animal feeds. Prerequisite: Chem. 133 and Biochem. 147. Credit 5(2-6).

Graduates and Advanced Undergraduates

505. Special Problems in Biochemistry

Problems in either plant or animal nutrition. Development of procedures and methods for isolation and synthesis of naturally occurring plant or animal constituents. Credit 2 to 6 hours.

506. Plant Biochemistry

Chemical composition of plants; methods of detailed analysis of active constituents of fresh and dried plant materials. Prerequisite: Biochem. 148. Credit 5(2-6).

CHEMISTRY

111. General Chemistry

Introduction to fundamental laws of matter that govern physical and chemical changes; classification of matter, a study of oxygen, hydrogen, simple compounds, nomenclature, atomic and molecular theories; valence. Credit 5(3-4).

112. General Chemistry

Properties, reactions and uses of important non-metallic elements; atomic structure, periodic functions and classification of elements; radioactivity, solutions and electrolytes. Prerequisite: Chem. 111. Credit 5(3-4).

113. General Chemistry

Metals, metallurgy, properties and uses; metallic ions in solution and arrangement in groups; ionic equilibrium, oxidation-reduction reactions. Prerequisite: Chem. 111 and 112. Credit 5(3-4).

121. Qualitative Analysis

Fundamental principles of analysis; preliminary experiences given to illustrate chemical principles; practice in equation writing, and interpretation of experimental results. Slags and alloys of unknown composition are analyzed. Prerequisite: Chem. 111 and 112. Credit 5(2-6).

122. Quantitative Analysis

Volumetric methods of analysis, placing emphasis upon physiochemical principles. Prerequisite: Chem. 121. Credit 5(2-6).

123. Quantitative Analysis

A gravimetric analysis. Prerequisite: Chem. 122. Winter. Credit 5(2-6).

131. Organic Chemistry

Introduction to carbon chemistry; a study of aliphatic compounds, saturated and unsaturated; nomenclature and simple synthesis. Fall. Credit 5(3-4).

132. Organic Chemistry

Aromatic compounds, Prerequisite: Chem. 131. Winter. Credit 5(3-4).

133. Advanced Organic Chemistry

Systematic identification of organic compounds with reference to the limitation of organic test reagents. Prerequisite: Chem. 131 and 132. Credit 5(3-4).

141. Physical Chemistry

Physical and theoretical aspects of chemistry dealing with atomic and molecular concepts of matter, the properties of gases, liquids and solids. Prerequisite: Physics 323, Math. 321 and 322. Credit 5(3-4).

142. Physical Chemistry

First and second laws of thermodynamics, thermochemistry, free energy, entropy, chemical equilibrium and phase equilibrium. Prerequisite: Chem. 141. Credit 5(3-4).

143. Physical Chemistry

Kinetics of chemical reactions, electromotive force, conductance, surface chemistry and colloids. Prerequisite: Chem. 142. Credit 5(1-4).

145. Introduction to Chemical Research

Designed to train students in the use of library and laboratory facilities. Required of all majors in chemistry. Prerequisite: Advanced standing in chemistry. Credit 5(1-4).

146. Chemical Engineering

Thermal properties of matter and energy relationships underlying chemical and physical processes; the first law of thermodynamics as applied to batch and flow processes, combustion, thermal control, etc. Prerequisite: Chem. 141, and Math. 321. Credit 4(4-0).

Advanced Undergraduates and Graduates**501. Chemical Literature Study**

Familiarization and uses of chemical periodicals, abstracts, dictionaries and research journals, introducing techniques used in research. Prerequisite: Chem. 131 and 132. Fall and Spring. Credit 2(1-2).

DEPARTMENT OF EDUCATION**PROFESSIONAL REQUIREMENTS FOR TEACHERS CERTIFICATES**

The professional education courses required for persons desiring a state teacher's certificate are designed to provide understandings, knowledges, skills and experiences which relate to the art and science of teaching. The professional courses in education are organized around three areas: The pupils; the school; and methods, observation, and practice teaching. The student who desires to meet the requirements for teacher certification in the high schools of North Carolina should complete a minimum of nine quarter hours in each of these areas. The student is required to complete the minimum requirements in the areas "The Pupil" and "The School" before he is eligible for credit in Methods, Observation and Practice Teaching, unless special permission is granted by the dean of the school in which the student is enrolled.

NOTE: State teachers' certificates are not issued by the College, but by the State Department of Public Instruction. Persons interested in securing a certificate to teach in the Public Schools of this State should contact the Division of Certification, State Department of Public Instruction, Raleigh, North Carolina, immediately after graduation. Certificates are issued only to persons who have graduated from a standard class "A" college and who have had the necessary professional courses.

The following are courses in each of the three major areas required in Professional Education:

THE PUPIL

Adolescent Psychology, Ed. 223	3 (2-2)
Educational Psychology, Ed. 231	3 (3-0)
Introduction to Guidance, Ed. 233	3 (2-2)

or

Evaluation and Measurements, Ed. 236	3 (2-2)
Elective: Field-Laboratory Experiences in Education, Ed. 234..2	($\frac{1}{2}$ -3)

THE SCHOOL

Introduction to the Study of Education, Ed. 222	3 (3-0)
Philosophy of Education, Ed. 224	3 (3-0)
Principles of Secondary Education, Ed. 237	3 (3-0)

or

Problems of Secondary Education, Ed. 238	3 (3-0)
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METHODS, OBSERVATION AND DIRECTED TEACHING

Materials and Methods of Teaching, Ed. 243, 245, 246, 247, 248, 249, 250	5 (5-0)
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(The particular methods course to be pursued by the student will be determined by his or her major or minor subject.)

Directed Teaching, Ed. 251	5 (2-6)
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Those desiring to pursue professional courses in teaching will be required to undergo counseling for the purpose of determining their capacity for profiting from the professional curriculum. After successful completion of one or two courses in professional education, students desiring teacher certification will be required to file a formal application in writing with the dean of their respective school. It is not recommended that students apply for the teacher education curriculum if the average in the field in which they plan to teach is less than "B".

COURSES IN EDUCATION

FOR UNDERGRADUATES

211. Orientation

This course consists of lectures and discussions designed to provide the student with functional insight into methods of improving study, taking notes, and using the library. It introduces the student to various broad groups of vocations. Effective matching of individual qualifications with significant occupational requirements will be considered. Any quarter. Credit 1(1-0).

212. Driver Education

Teaching Traffic Safety and Automobile Operation. Critical analysis of highway accidents; common practices of safety drivers; essential knowledge of automobile mechanisms; and practical driving. Lecture, 2 hours, practicum, 3 hours. Credit, 3 hrs.

213. Safety Education

Safety in the Home, Farm, School, Highway, and Industry. Studies of the common accidents in these areas, and some solutions. The course will bring in representatives of Fire Department, Highway Department, Health and Recreation to assist with topics. Credit, 3(3-0).

221. General Psychology

The objectives of this course are to acquaint the student with what psychology is, what it aims to do, how its data are gathered, and the principles of human behavior which it attempts to describe. This course will not be counted to meet the specific requirements in education for a high school teacher's certificate. Fall, Winter, Spring. Credit 5(5-0).

222. Introduction to the Study of Education

This course is designed to give the student an overview of the historical background of the systems of education in the United States, their aims, organization and procedures, and of the principles and practices on all levels of the American educational system. Consideration is given to qualifications for teaching with emphasis on the requirements of the state of North Carolina. Requirement of all students planning to qualify for a teaching certificate in North Carolina. Credit 3(3-0).

223. Adolescent Psychology

This course is designed to give the student a comprehensive survey of the pre-adolescent growth, development and maturation; and an intensive study of the physical, mental, emotional, social and moral growth through adolescence. Situations of a laboratory nature, in which the student might observe and record, classify and interpret the behavior of adolescents will be selected from the available facilities on the campus and in the community. This will be carried through by the case-study method. Adolescent problems will also be considered in the light of behavior and growth. Credit 3(2-2).

224. Philosophy of Education

The general aim of this course is to acquaint the student with a unified view of the whole educative process, in the light of modern Biology, Psychology, and Sociology, with emphasis on the philosophical bases and implications as they relate to the pupil, curriculum, teacher, and the institution. Credit 3(3-0).

225. Audio-Visual Education Laboratory

Practical experiences in the operation and maintenance of projectors, recorders, radios, television sets, etc. Laboratory fee \$2.00. Credit 3(2-2).

231. Educational Psychology

This course is designed to acquaint the student with the basic problems underlying the psychology of education. Its major topics include individual differences, the development of personality, motivation of learning and development, the nature of learning and the procedures which best promote its efficiency. Prerequisite: Ed. 223. Credit 3(3-0).

233. Introduction to Guidance

This course is designed to introduce the student to various systems of individual and group guidance, with special reference to the secondary school. The student will be required to develop and to defend his philosophy of guidance, by means of the best available evidence gleaned from experimentation and controlled observation at either on or off-campus agencies. Special attention will be paid to the development of theory and practice for handling special cases of learning deficiencies in reading, speech, writing, and mathematics. In the laboratory, the student will be introduced to practical guidance materials and to a variety of situations designed to bring into bold relief some of the fundamental promises of guidance. Credit 3(2-2).

234. Field-Laboratory Experiences

This course is designed to place the student in position to summon, organize, and supply to the task of helping individuals learn, all the resources of the school and community. The student will apply his mastery of the fundamental theoretical concepts essential to opening insight into behavior, to real situations in the field, provided by various community agencies. Opportunities will be given to become acquainted with the nature and use of the several audio-visual aids. The student will be expected to show progressive growth and maturation for handling children of different ages in, and from, different settings. Credit 2($\frac{1}{2}$ -3).

236. Measurement and Evaluation

In this course special attention will be paid to a variety of standardized and teacher-made measuring devices, to acceptable methods of selecting, administering, and interpreting all types of tests applicable to the school and classroom. Extensive practice in the administration and interpretation of selected tests, will be provided in a laboratory setting. Prerequisite: Education 221, 223, 231. Credit 3(2-2).

237. Principles of Secondary Education

This course is designed to provide the student with an understanding of the history, nature and functions of the secondary school and its

relationship to the elementary school and adult life. Major consideration will be given to the development of the secondary school, aims and functions of secondary education, characteristics of the secondary school pupil, the curriculum, the high school teacher, guidance, teaching load and professional ethics. Prerequisite: Ed. 231, Ed. 222 or Ed. 224. Credit 3(3-0).

238. Problems of Secondary Education

This course deals with problems which arise in secondary school administration and teaching. Problems of the secondary school relating to school discipline, classroom management, physical aspects of the classroom, economy features of teaching procedure, audio-visual aids, extra-classroom activities, health and safety education, sex education and the use of the library will be considered. Prerequisite: Ed. 222 or 224, Ed. 231. Credit 3(3-0).

241. Special Methods

This course is designed to assist the student in gaining an understanding of the use of special teaching methods, techniques, devices, and materials related to each of the special fields of teaching. Opportunity for students to observe classes and teachers at work will be provided. Open only to seniors. Prerequisite: Ed. 231, 237 or 238. Fall and Winter. Credit 5(5-0).

243. Methods of Teaching English

A study of materials and methods of teaching English in the high school. Required of those planning to teach English. Prerequisites: Forty hours of English, Ed. 231, and 237 or 238. Fall and Winter. Credit 5(5-0).

245. Methods of Teaching Social Sciences

Designed to provide the student with an understanding of the place of Social Sciences in high school and to assist him in understanding the techniques of social science instruction on the high school level. Required of those planning to teach the subject. Prerequisites: Forty hours of Social Studies, Ed. 231, and 237 or 238. Fall and Winter. Credit 5(5-0).

246. Methods of Teaching Mathematics

A course which deals with the evaluation of subject matter, materials, methods and techniques, and objectives in the teaching of mathematics in the junior and senior high school. Required of those planning to teach the subject. Prerequisite: 30 hours of Mathematics: Ed. 231, 237 or 238. Fall and Winter. Credit 5(5-0).

247. Methods of Teaching Modern Languages

This course is devoted to a study of the problems and difficulties experienced in teaching Foreign Languages. Special attention is given to

the matter of classroom aids, equipment, etc. Required of those students planning to teach languages. Prerequisite: 40 hours of French; Ed. 231 and 237 or 238. Fall and Winter. Credit 5(5-0).

248. Methods of Teaching Art

A study of the aims and objectives, methods and techniques of art teaching in the modern school. Special attention is given to planning courses of study, presentation, selection of equipment, reference and illustrative material and correlation. Considerable emphasis is placed on blackboard drawings. Required of those wishing to qualify as art teachers. Prerequisite: 45 hours of Art; Ed. 231, 237 and 238. Fall and Winter. Credit 5(5-0).

249. Methods of Teaching Science

A study of modern methods, materials and techniques of teaching such subjects as biology, chemistry, physics, and general science in the high school. Required of all those planning to teach in this field. Prerequisites: Forty hours of Science, Ed. 231, and Ed. 237 or 238. Fall and Winter. Credit 5(5-0).

250. Methods of Teaching Commercial Subjects

Organization, preparation and care of materials, followed by an analysis of the methods of procedure, standards and objectives of the teacher of commercial subjects in high school. Students may be admitted to this course only upon the recommendation of the head of the Department of Commercial Education. Fall and Winter. Credit 5(5-0).

251*. Directed Teaching

This course is designed to provide the students an opportunity to put to use methods, techniques, and materials of instruction in a real classroom situation under supervision. Prerequisites: Ed. 241, an average grade of "B" or above in the field in which directed teaching is to be done. Fall, Winter and Spring. Credit 5(2-6).

501. Introduction to Audio Visual Education

This course aims to orientate the student to the basic principles and practices of audio-visual aids for use in classroom instruction. Laboratory fee \$2.00. Credit 3(1-4).

502. Constructing Audio-Visual Materials

Constructing and designing audio-visual aids materials for the classroom use. Laboratory fee \$2.00. Credit 3(1-4).

*All students planning to teach are required to spend at least sixty clock hours in practice teaching in the type of school in which they plan to work. Students should schedule this course only after consultation with the director of practice teaching. In no instance will a student be permitted to carry more than thirteen hours (including Education 251) during the quarter this course is scheduled.

DEPARTMENT OF ELECTRICAL ENGINEERING

The curriculum of the Department of Electrical Engineering provides comprehensive training in the fundamental sciences—mathematics physics, chemistry—with sufficient work in the humanities to develop well-rounded engineers.

The required courses in electrical engineering which are offered by the Department may be mentioned briefly. Electrical power engineering has to do with the theoretical and practical phases of power generation, distribution and utilization. Electrical communication deals with transmission and signals, speech, music, and pictures by open wire lines, cables and radio. Electronics treats the statistical behavior of electrons and ions in various types of electrical equipment.

Throughout the course the teaching of theory and its modifications by practice, the development of an analytical judgment, and the acquiring of a fundamental scientific background are emphasized. The acquisition of specific factual knowledge is left, except when necessary to sound pedagogy, to the training in actual experience through which every electrical graduate must go during his first year out of school.

CURRICULUM

Freshman Year

(See First Year's Curricula of Mechanic Arts, Page 60.)

Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Math, 321, 322, 323	5 (5-0)	5 (5-0)	5 (5-0)
Physics 321, 322, 331	5 (3-4)	5 (3-4)	5 (4-2)
E. E. 324, 325, 326	5 (3-4)	5 (3-4)	5 (3-4)
Military Science 221, 222, 223	2 (2-2)	2 (2-2)	2 (2-2)
M. E. 323	3 (0-6)	.....	.....
Machine Shop 328 .....	.....	2 (0-4)	.....
M. E. 327 .....	.....	.....	3 (3-0)

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
E. E. 331, 332, 333	3 (3-0)	3 (3-0)	5 (3-4)
E. E. 334, 335, 336	3 (1-4)	4 (2-4)	3 (3-0)
M. E. 331, 332, 333	5 (5-0)	5 (5-0)	5 (5-0)
Math. 331	5 (5-0)	.....	.....
Phy. 332	5 (5-0)	.....	.....
M. E. 336 .....	.....	5 (5-0)	.....
M. E. 321 .....	.....	.....	4 (3-2)
M. E. 337 .....	.....	.....	3 (3-0)
Elective .....	.....	3 ( )	.....

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
E. E. 346, 347, 348	5 (3-4)	5 (3-4)	5 (3-4)
E. E. 355, 356, 357	5 (3-4)	5 (3-4)	5 (3-4)
E. E. 360 .....	.....	.....	5 (5-0)
Economics	5 (5-0)	5 (5-0)	.....
Electives	5 ()	3 ( )	.....

COURSES IN ELECTRICAL ENGINEERING

Suggested Electives

Math. 324	Math. 501, 506
English 224	Phy. 333, 337, 352.
Machine Shop 329	E. E. 351, 354
M. E. 341, 317, 339	

321. Basic Electrical Engineering I

A comprehensive coverage of electrical engineering fundamentals and applications for non-electrical engineering students. Elementary D.C. circuits; D.C. machinery; co-ordinated laboratory work. Prerequisites: Phy. 323, Math. 323. Credit 5(3-4).

322. Basic Electrical Engineering II

A continuation of E. E. 321. A.C. machinery theory; electron tubes and circuits; electrochemical processes; co-ordinated laboratory work. Prerequisites: E. E. 321. Credit 5(3-4).

323. Basic Electrical Engineering III

A continuation of E. E. 322. Electric motor applications; electrical illumination; industrial measurement and control; electrical communication; co-ordinated laboratory work. Prerequisite: E. E. 322. Credit 5(3-4).

324. Introduction to Electrical Engineering I

A fundamental course in electrical concepts and units, network concepts and units, with co-ordinated laboratory work for electrical engineering students. Corequisites: Phy. 321, Math. 321. Credit 5(3-4).

325. Introduction to Electrical Engineering II

A continuation of E. E. 324. Magnetic concepts and units, electromagnetic forces, motional electromagnetic forces. Co-ordinated laboratory work. Prerequisites: E. E. 324. Credit 5(3-4).

326. Introduction to Electrical Engineering III

A continuation of E. E. 325. Electric fields and concepts, capacitance, electrochemistry introduction to electronics. Prerequisites: E. E. 325. Credit 5(3-4).

331. Electric Circuit Analysis I

Electric circuit theory, parameters, and calculations; magnetic circuit and dielectric circuit theory and calculations. Prerequisites: Math. 323, Physics 323, E. E. 323. Credit 3(3-0).

332. Electric Circuit Analysis II

Vector Algebra as applied to A. C. circuit analysis, periodic functions; A. C. circuit parameters, theory and calculations. Prerequisite: E. E. 331, E. E. 334. Credit 3(3-0).

333. Direct Current Machinery

(Formerly Electric Circuit Analysis III). Principles, characteristics and operation of direct current apparatus. Laboratory work co-ordinated with class-room study. Required of Juniors in E. E. Prerequisites: E. E. 332. Credit 5(3-4).

334. Electrical Measurements I

Theory and operation of wheatstone bridges, ballistic galvanometers, potentiometers, various methods of measuring direct current network parameters. Credit 3(1-4). Prerequisites: E. E. 332, or Physics 331, Math. 323, Physics 323. Corequisite for E. E. students, E. E. 331.

335. Electrical Measurements II

A. C. bridges, measurement of power, A. C. circuit parameters, magnetic measurements. Credit 4(2-4). Prerequisite: E. E. 334. Corequisite: E. E. 332.

336. Electrical and Magnetic Fields

Electric and magnetic field theory; electron ballistics. Prerequisites: M. E. 332, E. E. 326, Math 331. Credit 3(3-0).

346. Applied Electronics

Electron ballistics, electron emission, vacuum tubes, gas filled tubes, specialized tubes, applications to communication, industrial control, physical measurements. Credit 5(3-4). Prerequisites: Math. 331, E. E. 333, E. E. 336, or special consent of instructor. This course was formerly Communication Engineering.

347. Radio Engineering I

Network theorems, impedance transformation, distributed constants, coupled circuits, amplifiers and oscillators. Credit 5(3-4). Prerequisites: E. E. 346, Math. 331. This course formerly Communication Engineering.

348. Radio Engineering II

Modulation, detection, receiving and transmitting systems. Credit 5(3-4). Prerequisite: E. E. 347. This course formerly Communication Engineering.

351. Power Transmission Lines

Application of transmission line parameters. Credit 5(5-0). Prerequisites: E. E. 347, Math. 331.

354. Radio Circuits

Special topics and laboratory work of special interest to the student. Most of the work is given by the project method. Credit 5(1-8). Prerequisite: E. E. 346.

355. Alternating Current Apparatus I (Formerly D. C. Machinery)

Principles, characteristics and operation of alternating current apparatus. Application of circuit theory to A. C. machinery; static transformers. Prerequisites: E. E. 332. Credit 5(3-4).

356. Alternating Current Apparatus II

A continuation of E. E. 355. Induction machinery and applications. Prerequisites: E. E. 355. Credit 5(3-4).

357. Alternating Current Apparatus III

A continuation of E. E. 356. Synchronous machinery and applications; inverters and power rectifiers. Prerequisites: E. E. 356. Credit 5(3-4).

360. Electromagnetic Waves

A study of Maxwell's equations with applications to the transmission of plane waves; analysis of wave guides and antenna systems. Prerequisites: E. E. 336. Corequisite: E. E. 348. Credit 5(5-0).

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

AIMS OF THE DEPARTMENT OF ENGLISH

The objectives of the department of English are as follows:

1. To develop in students the skills and techniques of effective writing, reading, and speaking.
2. To lead students to the realization that a mastery of the tools of communication contributes to achievement in all fields of major concentration and to success in all phases of living.

3. To equip students with adequate subject-matter background for the effective teaching of English and with the skills essential to the attainment of related vocational objectives.
4. To cultivate in students an appreciation for literature; to develop ability to interpret it readily; to stimulate a taste and desire for wide reading of the best forms of literature.
5. To prepare and train students for graduate study in English.

GENERAL REQUIREMENTS

All freshmen are required to take a placement test in English. Those failing this test must register for Remedial English (Eng. 210).

A minimum of twenty quarter hours in English is required for graduation from all departments. All students of all departments must take Eng. 211, Eng. 212, and Eng. 213. Five hours of literature are required.

ENGLISH MAJORS AND MINORS

English majors and minors are required to have an average of B in their three Freshman English courses and to pass a comprehensive examination in the field of English at the end of the Fall Quarter of their senior year. Those failing this examination will be required to register for English 245.

A major in English is designed for persons interested in teaching English in the secondary school or in pursuing graduate work in the field. It is also recommended for those intending to follow law, the ministry, writing, or research as a profession.

Requirements for the major (in addition to the three Freshman English courses):

English 220
English 221
English 222
English 223
English 224
English 234
English 237
English 244

Electives from any advanced English courses sufficient to complete the required 50 hours.

Requirements for the minor (in addition to the three Freshmen English courses):

English 220
English 221
English 223
English 224
English 234
English 237
English 244

COURSES IN ENGLISH LANGUAGE AND COMPOSITION

210. Remedial English

Emphasis upon the elementary requirements in English usage; such as, the rudiments of grammar, punctuation, and spelling. Students who fail to pass the placement test in English are required to complete this course in addition to the regular English requirements. Credit 3(3-0).

211. Grammar

A review of the fundamental principles of grammar and the application of these principles in sentences and paragraphs. Any quarter. Credit 5(5-0).

212. Composition

Practice in paragraph development, outlining, letter writing, short themes and using the library. This very practical course introduces the student to the kinds of writing he is likely to do anyway. Prerequisite: English 211. Credit 5(5-0).

213. Composition and Reading

This course introduces the student to the techniques of research writing. Prerequisite: English 212. Credit 5(5-0).

231. Journalism

Theoretical and practical work in recognizing, gathering, and writing news. While primary attention is given to the development of journalistic technique, there is considerable drill on the fundamental principles of composition. Prerequisite: English 213. Credit 3(3-0).

236. Argumentation and Debating

A study of the principles of argumentation. The course consists of discussions, lectures, and classroom debates, all of which procedures are preliminary to public debates. Prerequisite: Eng. 213. Credit 3(2-2).

237. Advanced English Grammar

A study of English grammar with emphasis on the present status of modern American English. Spring. Credit 3(3-0).

244. Advanced Composition

This course is intended to strengthen the techniques of writing developed in English 212 and 213. The student will not only strengthen and polish his written expression, but he will have opportunity to practice on the more specialized forms of writing that appeal to him. Credit 3(3-0).

245. Review for English Majors and Minors

This course is planned particularly for seniors who desire personal attention in further mastering the fundamentals of English composition and in becoming more conversant with the general field of English and American literature. Required of all Senior English Majors and Minors who fail the Comprehensive Examination. Winter. Credit 0(2-0).

SPEECH AND EXPRESSION**224. Voice and Speech Improvement**

Drill and exercise to improve speech and voice in the classroom, at social affairs, in club meetings, in vocational pursuits, and in other everyday speech situations. Any quarter. Credit 3(2-2).

225. Public Speaking

A study of the basic attributes and the fundamental processes of speech. Practice in speech organization and delivery. Prerequisite: Eng. 224. Credit 3(2-2).

227. Oral Interpretation

Training in expressive audience reading of selections from classical and modern literature. Credit 3(1-2).

228. Acting

A laboratory course designed to develop skill in voice, diction, and pantomime by means of readings, monologues, skits, and short plays for school and community. Practical experience in the major A. and T. dramatic productions. Credit 3(1-4).

229. Parliamentary Procedure

Theory and practice in the rules and customs governing organization and proceedings of deliberative bodies. Prerequisite: English 213. Credit 1(0-2).

LITERATURE**215. Negro Literature**

A survey of all important Negro writers from pre-Civil War days to the present. Reading, reports (oral and written), and one special topic. Credit 3(3-0).

220. Introduction to American Literature

A survey of American literature from colonial times to the present. Prerequisite: Eng. 213. Credit 5(5-0).

221. American Literature

American Literature from 1860 to the present. Prerequisite: English 213. Credit 5(5-0).

222. Development of English Literature

Reading in English Literature from the beginnings to 1700. Study of the growth of ideas and institutions, of the types of literature, and of the great personalities who have contributed most to the literature. Lectures. Reports. Credit 3(3-0).

223. Development of English Literature

English Literature from 1700 to the twentieth century. Audio-visual aids shall be used. Lectures. Reports. Prerequisite: Eng. 213. Credit 5(5-0).

226. Dramatic Literature

A survey of dramatic literature. Origin of the drama; readings in Greek, classical French, Elizabethan, and contemporary drama. Credit 3(3-0).

234. Shakespeare

A detailed, chronological study of the principal plays taken from all four of the periods of dramatic production. Lectures, reports, one long paper. Prerequisite: 20 hours of English. Credit 5(5-0).

242. The Romantic Era

The principles and ideas of Romanticism as expressed in the works of the principal English writers of poetry and prose from 1798 to 1823. Term report. Credit 3(3-0).

243. The Victorian Era

Readings in the works of the principal English writers of the Victorian Age. Term report. Credit 3(3-0).

246. The Novel in English

The growth and development of the novel in English from the eighteenth century to the present time. Credit 3(3-0).

DEPARTMENT OF ART

GENERAL STATEMENT

The objectives of this course are as follows:

- (a) To discover and develop the latent talent of students for artistic expression and lay a foundation for careers as creative artists.
- (b) To meet a growing demand for specially trained art teachers in our public schools and colleges.
- (c) To develop tastes and discriminations in the choice of materials used in everyday life which will find expression in more beautiful homes and gardens, schools, parks, playgrounds and other public works.
- (d) To provide a culture leading to a more worthy use of leisure time.

All students wishing to major in art must pass a special examination or submit some of their art work for appraisal. Students in other departments desiring special work in art may by arrangement with the instructor take any course listed under art.

CURRICULUM OF ART

Freshman Year

(See First Year's Curricula of Mechanic Arts, Page 58.)

Note: Students majoring in Art will take History 213 during freshman year.

Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
English Elective .....	.....	.....	5(5-0)
French 214, 215	5(5-0)	5(5-0)	.....
Modern European History 211 or 212	5(5-0)	.....	.....
Freehand Drawing 311, 312, 313	3(0-6)	3(0-6)	3(0-6)
Art Appreciation 314, 315, 316	2(2-0)	2(2-0)	2(2-0)
Military Science 221, 222, 223	2(2-2)	2(2-2)	2(2-2)
Art 317, 318, 319 Color and Design	3(0-6)	3(0-6)	3(0-6)
Elective .....	.....	3 hrs.	3hrs.
	<hr/> 20 hrs.	<hr/> 18 hrs.	<hr/> 18 hrs.

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
American History 221 or 222	5(5-0)	.....	.....
Mediaeval History 232 .....	.....	5(5-0)	.....
Commercial Art 321, 322, 323	3(0-6)	3(0-6)	3(0-6)
Portrait, Art 334, 335, 336	2(0-4)	2(0-4)	2(0-4)
Art Appreciation 327, 328, 329	2(2-0)	2(2-0)	2(2-0)
Ceramics 337, 338, 339	3(0-6)	3(0-6)	3(0-6)
Composition Art 331, 332, 333	2(0-4)	2(0-4)	2(0-4)
Elective .....	.....	.....	3 hrs.
	<hr/> 17 hrs.	<hr/> 17 hrs.	<hr/> 17 hrs.

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
History 231	5(5-0)	.....	.....
Figure Drawing, Art 341, 342	3(0-6)	3(0-6)	.....
Oil Painting, Art 347, 348, 349	3(0-6)	3(0-6)	3(0-6)
Phy. Ed. 234 .....	.....	.....	5(5-0)
Electives	6 hrs.	11 hrs.	9 hrs.
	<hr/> 17 hrs.	<hr/> 17 hrs.	<hr/> 17 hrs.

Suggested Electives

History of Architecture 324, 325, 326.

Education 222, 231, 248, 251, 223, 237 or 238, 233, 224.

COURSES IN ART

311. Freehand Drawing

This course is a study of the fundamental principles of drawing. As a useful mode of visual expression selected problems involving basic considerations of line, mass and color are presented for analysis and laboratory practice. Credit 3(0-6).

312. Lettering and Poster Design

This course is a comprehensive study of the art of lettering with speedball pens, the principles of the layout, poster construction and general advertising. Credit 3(0-6).

313. Water-color Painting

This course aims to give a working knowledge of color both from the standpoint of its use and enjoyment—various theories of color are analyzed along with drills on the techniques of water-color painting. Credit 3(0-6). Prerequisite: 311.

314. Art Appreciation

This is an introductory course to the study of fine arts. Basic qualities of various forms of artistic expression are explained. Emphasis is placed on the application of art principles in everyday life. Credit 2(2-0).

315. Art Appreciation

This course is a study of the art historic periods. Representative examples of the architecture and sculpture of ancient Egypt, Greece and Rome are selected for analysis, interpretations and comparisons. Credit 2(2-0).

316. Art Appreciation

This course traces the development of the art of painting from the Italian Primitives through the English School by means of analysis and comparisons of works of representative painters. Credit 2(2-0).

317. Color and Design

This course deals with the theory of color and principals of pure design as applied in Textiles. The development of decorative motifs, all-over patterns, sources of design. Fall. Credit 3(1-5).

318. Intermediate Design

This course is a continuation of 317 with greater emphasis on the development of the student's creative ability. Introduction of block printing and stenciling. Credit 3(1-5). Prerequisite: Art 317.

319. Advanced Design

This course is a continuation of 318 with emphasis on applying basic principles to the production of industrial products work with looms, hand weaving, leather work and textile dyeing. Credit 3(0-6). Prerequisite: Art 318.

320. Figure Drawing

This course is a study of the human figure with emphasis on Anatomy, body structure and human proportions, draped and undraped figures at rest and in action. Spring. Credit 3(1-5).

321. Commercial Art

This is an advanced course in Freehand Drawing—with considerable emphasis on the techniques of mediums used in commercial art—laboratory drills in sketching and rendering in pen and ink and wash. Prerequisite: 313. Credit 3(0-6).

322. Commercial Art

This is a continuation of 321. In this course water color and show-card color are used with continued drills in laboratory techniques suitable for reproduction—cartooning. Prerequisite: 321. Credit 3(0-6).

323. Commercial Art

This course aims at guiding the student towards such specific branches of commercial art as book jacket designs—layouts for newspapers, designs for calendars, greeting cards, magazine illustrations, posters, etc. Prerequisite: 322. Credit 3(0-6).

324. History of Architecture

This first course is a study of the beginning of Ancient and Classical Architecture. Credit 4(4-0).

325. History of Architecture

This course is a continuation of the first course including Middle Ages and Renaissance. Prerequisite: Art 324. Credit 4(4-0).

326. History of Architecture

A study of modern architecture is covered in this course with particular emphasis placed on modern housing. Prerequisite: Art 325. Credit 4(4-0).

327. Art Appreciation

This course is a study of the arts in America. Beginning with a study of the crafts and continuing through American Architecture, representative personalities and their works are studied, analyzed and interpreted. Credit 2(2-0).

328. Art Appreciation

This course traces the development of the art of sculpture in America from the Revolutionary period to the present era. Credit 2(2-0).

329. Art Appreciation

This course traces the development of the art of painting in America from the Revolutionary period to the present era. Emphasis is placed on analysis and interpretation of representative works. Credit 2(2-0).

331. Composition

This course is a study of the basic principles of pictorial composition or designing the picture with definite consideration of the requirements of commercial art, drills in abstract arrangements of dark and light. Credit 2(0-4).

332. Composition

This course is a continuation of 331 with emphasis on the study of accessories, figure arrangement and expression. Prerequisite: 331. Credit 2(0-4).

333. Composition

This course is a continuation of 332 with the introduction of a wide range of assigned topics or themes to be illustrated with original pictures. Emphasis is placed on originality, design, and expression. Credit 2(0-4).

334. Portrait

This course consists of drawing from the antique or cast drawing as a foundation for drawing from life. Basic considerations in modeling in full scale of values are studied and practiced: medium, charcoal. Credit 2(0-4).

335. Portrait

This course is a study of the techniques in the reproduction of photographs in charcoal and pastel. Emphasis on laboratory techniques. Prerequisite: 334. Credit 2(0-4).

336. Portrait

This course is a study of the technique of portraiture. Studies are made from living models with emphasis on composition and expression. Prerequisite: 335. Credit 2(0-4).

337. Elementary Ceramics

Art principles applied in the field of Ceramics. Study of the historical development, materials and processes, structural forms, simple exercises in modeling in clay. Supplementary reading and laboratory practice. Fall. Credit 3(1-5).

338. Ceramics

This is an intermediate course. Emphasis is placed on laboratory techniques, casting, approved practices and procedures. Winter. Credit 3(1-5). Prerequisite: Art 337.

339. Advanced Ceramics

Much attention is devoted to modern methods of production, building of Armatures and casting in plaster. Making of moulds, one piece, waste moulds and piece moulds, decorative processes in relation to glazing and firing. Creative thought is stimulated by composition of original designs and collecting and analysis of contemporary works. Prerequisite: 338. Credit 3(1-5).

341. Figure Drawing

This course is a study of the human figure from life. A study of the full length figure with emphasis on proportion, action and modeling in full values. Credit 3(0-6).

342. Figure Drawing

This course is a continuation of 341 with emphasis on laboratory techniques in drawing and painting from life. Credit 3(0-6).

347. Oil Painting

This course is an advanced study of oil painting. Emphasis is placed on the technique of oil painting, still life, landscapes and portrait. Credit 3(0-6).

348. Oil Painting

This course is a continuation of 347 with emphasis on the development of original themes. Prerequisite: 347. Credit 3(0-6).

349. Oil Painting

This course is a continuation of 348 with emphasis on originality of subjects and treatment. Prerequisite 348. Credit 3(0-6).

DEPARTMENT OF FOREIGN LANGUAGES

The department aims to develop reasonable facility in the reading, speaking, and writing of the principal modern foreign languages. It endeavors, furthermore, to lead students to an intelligent appreciation of outstanding literary masterpieces, to develop a better knowledge of continental contributions to modern culture, and to create a spirit of understanding that will result in proper attitudes toward different national groups.

Elementary French courses 211, 212, 213 are recommended for those students who have no previous knowledge of French, or who present one unit of high school credit. For those students presenting two units of high school credit, Intermediate French courses 214 and 215 are required. However, if students with two units of high school French should take Elementary French, they are required to complete 15 hours on the same level.

The following courses are suggested as majors and minors and are recommended for those interested in graduate study, research, government service, or commerce.

For Freshman and Sophomore Courses, see page 62.

MAJOR IN FOREIGN LANGUAGES

Junior Year			
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
French 214, 215, 215.....	5(5-0)	5(5-0)	5(5-0)
French 217, 218, 219	3(3-0)	5(5-0)	5(5-0)
Spanish 211, 212, 213	5(5-0)	5(5-0)	5(5-0)
Minor or Electives	5(5-0)	3(3-0)	3(3-0)

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
French 221, 222, 223	5(5-0)	5(5-0)	5(5-0)
French 231, 245, 247	5(5-0)	5(5-0)	5(5-0)
Spanish 214, 215, 216	5(5-0)	5(5-0)	5(5-0)
Minor or Electives	3(3-0)	3(3-0)	3(3-0)

COURSES IN FRENCH

211. Elementary French

Special attention is given to gaining a complete knowledge of the essentials of grammar and pronunciation, to the acquisition of a vocabulary, and to elementary composition. Fall. Credit 5(5-0).

212. Elementary French

This course continues the work in grammar and pronunciation. Conversation and dictation are encouraged. Winter. Credit 5(5-0).

213. Elementary French

Practice in oral and written composition is continued. The early acquisition of taste for advanced French is stimulated through the reading, translation, and interpretation of easy modern French prose. Spring. Credit 5(5-0).

214. Intermediate French

This course is open to students who have completed two units of high school French on college French 211, 212, 213. A brief review of grammar is followed by practice in pronunciation. Fall. Credit 5(5-0).

215. Intermediate French

The reading of French plays is encouraged, and the ability to write and converse in French is further developed. Winter. Credit 5(5-0).

216. Phonetics

This course is intended for students majoring and minoring in French. It is also recommended for those who wish to improve their pronunciation of the language. Spring. Credit 5(5-0).

217. French Literature of the Middle Ages and the Renaissance

A general introduction to the more advanced study of French literature. Its purpose is to give a clear idea of the great periods and the main tendencies in the history of French thought and letters from the Middle Ages to the Seventeenth Century. Fall. Credit 5(5-0).

*218. Advanced French Composition

An advanced course in oral and written self-expression in French. Special attention is given to vocabulary building, free composition, and conversation, prepared and improvised, covering the many phases of everyday activities. Spring. Credit 5(5-0).

***219. Advanced French Conversation**

A course for students having some experience in written French. It aims to improve oral and aural conversation. Some groups will be arranged for practice in French conversation. Spring. Credit 5(5-0).

***220. Advanced French Grammar and Reading**

The object of this course is to give the student practical training in the use of advanced French grammar and reading. It is conducted largely in French. Spring. Credit 5(5-0).

221. French Literature in the Seventeenth Century

This course presents Classicism through the masterpieces of Corneille, Racine, Moliere and other authors of the "Golden Period" in French letters. Conducted in French. Fall. Credit 5(5-0).

222. French Literature of the Eighteenth Century

The object of this course is to study in particular the life and works of Montesquieu, Voltaire, Rousseau, and the Encyclopedists. Conducted in French. Winter. Credit 5(5-0).

223. French Literature of the Nineteenth Century

The object of this course is to study the great literary currents of the nineteenth century, romanticism and realism. Spring. Credit 5(5-0).

231 (Formerly 243). Modern and Contemporary French Literature

This course deals with the chief writers and literary currents of the time. Lectures and outside readings. Credit 3(3-0).

233. Intermediate Conversational French

The chief aim of this course is to give students intensive training in self-expression and to improve their pronunciation and diction in reading and speaking. Class is conducted in French. Spring. Credit 3(3-0).

245. French Civilization

A general survey of the history of France, with emphasis on its social, political and economic developments designed to give the student an understanding of present conditions and events. A detailed study is made of such French institutions as art, music and education. This course is also offered in conjunction with reports on collateral readings. Credit 5(5-0).

246. French Seminar. Thesis Problem

Open only to seniors majoring in Foreign Languages. Credit 3(3-0).

*Offered in alternate years. Not offered in 1952-1953.

247. French for Prospective Teachers

This course is elective for seniors with the consent of the instructor. A brief review of the principles of grammar is followed by an intensive drill in phonetics. Aims, problems, methods, and texts are discussed. Spring. Credit 3(3-0).

COURSES IN SPANISH**211. Elementary Spanish**

The primary object of this course is to secure the understanding of easy Spanish, written and spoken. Much attention is given to the essentials of grammar and pronunciation. Fall. Credit 5(5-0).

212. Elementary Spanish

This course continues the work in grammar and pronunciation. Prose reading is encouraged by exercises in vocabulary building. Winter. Credit 5(5-0).

213. Elementary Spanish

Attention is given to advanced elementary grammar. Prose reading continues and a taste for advanced Spanish is stimulated through the reading of poetry. Credit 5(5-0).

214. Intermediate Spanish

This course is open to students who have completed two units of high school Spanish or college Spanish 211, 212, 213. Thorough review of Spanish syntax with emphasis on its essential difficulties. Fall. Credit 5(5-0).

215. Intermediate Spanish

Practice in writing idiomatic Spanish in translations and free compositions. Readings from modern authors. Winter. Credit 5(5-0).

216. Survey of Spanish Literature

A survey of the most important movement, writers, and works from the Middle Ages up to the present time. Spring. Credit 5(5-0).

DEPARTMENT OF HOME ECONOMICS

The Department of Home Economics offers courses designed for curricula leading to the Bachelor of Science Degree in the following subject matter areas: (1) Clothing, Textiles and Related Art, (2) Foods and Nutrition, (3) General Home Economics, and (4) Nursery School Education. Two-year terminal programs leading to a certificate are offered in (1) Dressmaking, and (2) Cafeteria Management.

The several curricula have been organized to meet the needs of students who plan to train for professional employment as (1) teachers in public schools, colleges, nursery schools and home economics extension service; (2) civil service; (3) home and family relationships and (4) business enterprise.

Students who plan to take courses in Home Economics leading to the degree of Bachelor of Science should follow the Basic Curriculum in Home Economics for the freshman and sophomore years (see page 55). The Head of the Home Economics Department and faculty will assist the student in planning her program for the junior and senior years.

Special programs will be arranged to meet the needs of students who wish to follow the two-year programs in Dressmaking, and Cafeteria Management.

CHILD DEVELOPMENT AND FAMILY RELATIONSHIP

112. Home Nursing

Care of the sick in the home; demonstrations of improvising equipment and techniques of caring for the sick in the home. Credit 2(1-2).

113. Family Relationships

Problems of parents and children as affected by the home environment. Credit 3(3-0).

114. Practical Child Care

Child care and training with emphasis on the nature of the young child and its needs. Laboratory experience with children in the nursery school. Credit 3(2-4).

124. Family Health

Problems in family, personal and community health. Credit 3(2-2).

131. Child Development

The physical, mental, social and emotional growth of the child up to five years. Observation and care of children in nursery school. Credit 3(2-2).

132. Child Development

Problems of the child from five years to adolescence. Planning, organization and supervision of playgrounds for children of school age. Credit 3(3-0).

141. Children's Literature

Books, stories, and poetry for young children. Practical experience in writing and telling stories for children. Credit 3(3-0).

CLOTHING, TEXTILES AND RELATED ART**111. Elementary Clothing**

Fundamental principles of clothing construction, use of commercial patterns and problems in wardrobe planning. Credit 3(1-4).

112. Textiles

Textile fibers, their source, characteristics and production into fabric. The social, economic and hygienic aspects and care of clothing. Credit 3(2-2).

120. Vocational Clothing

Practical experience in dressmaking. Credit 1-3 hours per quarter. Maximum credit 9 hours.

121. Clothing for the Family

Problems in selecting clothing for various members of the family with emphasis placed on children's clothing. Prerequisite: C. T. R. A. 111. Credit 3(1-4).

124. Home Crafts

Batik, block printing, stenciling, weaving and other leisure-time crafts. Credit 2(0-4).

125. Home Crafts

Decorative stitches and their application to dress and home furnishings. Credit 2(0-4).

126. Home Crafts

Practical experience in re-upholstering, making slip covers and draperies. Credit 3(1-4).

131. Historic Costume and Design

A study of the history of costume and its adaptation to our modern dress. Credit 3(2-2).

132. Fitting and Pattern Study

Fundamental principles of drafting patterns and problems in fitting various types of figures. Credit 4(1-6).

133. Dress Design

Draping and designing in the actual fabric on the form with emphasis on line, form and texture of fabric. Prerequisite: C.T.R.A. 132. Credit 3(1-4).

134. Clothing Reclamation

Problems in altering, repairing, remaking, redyeing, and reclaiming clothing. Credit 3(1-4).

135. Millinery

Copying, designing, blocking, pattern making, draping on the block and on the head of handmade hats using various millinery materials. Credit 3(1-4).

141. Advanced Clothing

Techniques in the tailoring of custom-made garments and expert handling of more difficult fabrics. Credit 5(2-6).

Advanced Undergraduates and Graduates**502. Advanced Textiles**

Laboratory testing of various fabrics. Credit 3(1-4).

FOODS AND NUTRITION**121. Food Selection and Preparation**

Preparation and service of foods including foundational cookery methods and techniques in service. Credit 5(3-4).

122. Food for the Family

Simple nutritional problems of feeding the family and specific study of foods for family consumption. Credit 4(2-4).

123. Nutrition

Basic foodstuffs as are essential for health, and how diets can be improved to include adequate amounts of these substances. Credit 5(4-2).

131. Experimental Cookery

An analytical study of food products and how better food preparation may be brought about. Credit 4(2-4).

132. Cafeteria Management

Problems of organization, supervision and administration of institutional food service centers. Credit 5(3-4).

133. Quantity Cookery

Practical experience in the preparation and service of foods for large groups. Credit 3(1-4).

134. Child Feeding

Proper foods for children at various ages with practical experience in nursery school. Credit 3(2-2).

142. Diet and Disease

Treatment of diseases through diet therapy. Credit 3(3-0).

145. Cafeteria Management Apprenticeship Credit 2-6.

Advanced Undergraduates and Graduates**501. Advanced Nutrition**

Experimental problems dealing with the science of specific foodstuffs. Credit 5(3-4).

HOME ADMINISTRATION**112. Home Management**

Managing and caring for the home including the utilization of family resources. Credit 3(3-0).

113. Home Improvement

Practical problems in floriculture, vegetable gardening, poultry production, applied electricity and general woodwork for the home. Credit 5(3-4).

123. Consumer Problems

Problems of consumption, merchandizing practice, legislation relating to consumer goods and organizations interested in the solution of consumer problems. Credit 3(3-0).

134. Housing

Socio-economic aspects of housing as applied to architectural design and construction. Credit 3(2-2).

135. Interior Decoration

Arrangement of home furnishings with emphasis on color, line and design. Credit 3(2-2).

142. Household Equipment

Selection, operation and care of household equipment. Credit 3(2-2).

143. Home Management Residence

Practical experience in managing the home. Credit 5.

DEPARTMENT OF INDUSTRIAL EDUCATION

The public schools of North Carolina, like the public schools of many states, are in constant need of securing qualified teachers of industrial education. To meet the needs, A. and T. College offers training in these fields of concentration.

TEACHER TRAINING FOR INDUSTRIAL ARTS EDUCATION

The prospective teacher of industrial arts education receives general college training in addition to general training in the manipulative skills

of several trades. In addition, he is given instruction in shop organization, shop management, and in the essential professional courses for teachers.

The fields of concentration in teacher-training for industrial arts education are automobile mechanics, masonry, welding, machine shop practice, woodworking, carpentry, mechanical drawing, vocational drawing, electricity, ceramics, and textiles. Radio servicing.

CURRICULUM FOR INDUSTRIAL ARTS EDUCATION

Freshman Year

(See First Year's Curricula of Mechanic Arts, Page 60.)

Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Phyics 321, 322, 323	5 (3-4)	5 (3-4)	5 (3-4)
General Woodwork, I.A. 321, 322	5 (0-10)	5 (0-10)	.....
Advanced Woodwork, I.A. 323 .....	.....	.....	5 (0-10)
Freehand Drawing, Art 311, 312, 313	3 (0-6)	3 (0-6)	3 (0-6)
Military Science, 221, 222, 223	2 (2-2)	2 (2-2)	2 (2-2)
Materials of Construction, I.A. 324	3 (3-0)	.....	.....
Machine Shop Practice, M.E. 328, 329	2 (0-4)	2 (0-4)	.....
Introduction to Ed. 222 .....	.....	3 (3-0)	.....
Music 211 .....	.....	.....	2 (2-0)
Phy. Ed. 220 .....	.....	.....	1 (0-2)
	<hr/> 20	<hr/> 20	<hr/> 18

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Woodturning, Upholstery, Finishing	3 (0-6)	3 (0-6)	3 (0-6)
I. A. 338, 339, 340 .....	.....	.....	.....
Vocational Drawing, I. A. 331, 332, 333	3 (0-6)	3 (0-6)	3 (0-6)
Vocational Guidance, Ed. 332 .....	.....	.....	3 (0-6)
Economics 231, 234 .....	.....	5 (5-0)	5 (5-0)
Ed. Psychology, Ed. 231 .....	.....	.....	3 (3-0)
Public Speaking, Eng. 224	3 (3-0)	.....	.....
Adolescent Psychology, Ed. 223	3 (3-0)	.....	.....
Masonry 311, 312	3 (0-6)	3 (0-6)	.....
Art 337, 338	3 (0-6)	3 (0-6)	.....
Philosophy of Ed., Ed. 224	3 (3-0)	.....	.....
Measurements and Evaluation, Ed. 236....	.....	.....	3 (3-0)
Vocational Education, Ed. 331 .....	.....	3 (3-0)	.....
	<hr/> 21	<hr/> 20	<hr/> 20

	Senior Year		
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Electricity, I. A., Ed. 326, 327, 328.....	3 (0-6)	3 (0-6)	3 (0-6)
Auto Mechanics, I. A., Ed. 325 .....	.....	3 (0-6)	.....
Principles of Sociology, Soc. 231	5 (5-0)	.....	.....
Materials, Equipment and Shop			
Management, I. A., Ed. 347 .....	.....	3 (3-0)	.....
History of Industrial Education,			
I. A., Ed. 341 .....	.....	3 (3-0)	.....
Observation and Practice Teachings in			
Industrial Education, Ed. 344 .....	.....	.....	5 (5-0)
Trade Analysis, Ed. 341	3 (3-0)	.....	.....
Methods of Teaching Industrial			
Education, Ed. 343 .....	.....	5 (5-0)	.....
Carp. 313, 314 .....	.....	3 (0-6)	3 (0-6)
Phy. Ed. 234	5 (5-0)	.....	.....
Principles of Secondary Ed., Ed. 237	3 (3-0)	.....	.....
	19 hrs.	20 hrs.	11 hrs.

Suggested Electives

Carpentry 312	3 hrs.
Cabinetmaking 312, 313, 314	3 hrs.
Woodturning, Upholstering, and Finishing,	
I. A. 338-A, 339-A, 340-A	3 hrs.
Comprehensive Shop Projects, I. A. Ed. 348	3 hrs.

TRAINING FOR VOCATIONAL INDUSTRIAL EDUCATION

a. **Teacher.** The prospective teacher of Vocational Industrial Education receives general college training in addition to specific training in the manipulative skills of a trade. In addition, he is given instruction in shop management, and in the essential professional courses for teachers. To meet these requirements, the student should select option I curriculum of the Vocational Industrial Education program.

The fields of concentration in teacher-training for industrial education are automobile mechanics, cabinetmaking and upholstery, carpentry, masonry, mechanical drawing, plumbing and steam fitting, shoe repairing, machine shop practice, tailoring, radio servicing and television.

b. **Non-teacher.** This course is designed to meet the needs of students who desire to have practical experience and knowledge of the subject-matter, as well as, the technical training required for effective service in such vocations as automobile mechanics, carpentry, cabinetmaking, and upholstery, masonry, mechanical drawing, machine shop practice, plumbing, shoe repairing, tailoring, welding, and radio servicing. In addition, he may elect specified professional teacher-training courses. To meet these requirements, the student should select option II of the Vocational Industrial Education Curriculum.

CURRICULUM FOR VOCATIONAL INDUSTRIAL EDUCATION

Freshman Year

(See First Year's Curricula of Mechanic Arts, Page 60.)

Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Industrial Lab. V. I., Ed. 321, 322, 323....	7(2-10)	7(2-10)	7(2-10)
Physics 321, 322, 323	5(3-4)	5(3-4)	5(3-4)
Military Science 221, 222, 223	2(2-2)	2(2-2)	2(2-2)
Materials of Construction, I. A. 324	3(3-0)	.....	.....
Machine Shop Practice, M. E., 328, 329....	.....	2(0-4)	2(0-4)
Freehand Drawing, Art 311, 312, 313	3(0-6)	3(0-6)	3(0-6)
	<hr/> 20 hrs.	<hr/> 19 hrs.	<hr/> 19 hrs.

OPTION I*

Junior Year

Industrial Lab. V. I. Ed. 331, 332, 333	7(2-10)	7(2-10)	7(2-10)
Public Speaking, Eng. 224	3(3-0)	.....	.....
Adolescent Psychology, Ed. 223 .....	.....	.....	3(3-0)
Music 211	2(2-0)	.....	.....
Introduction to Ed., Ed. 222 .....	.....	3(3-0)	.....
Philosophy of Ed., Ed. 224 .....	.....	.....	3(3-0)
Measurements and Evaluation, Ed. 236 ....	.....	3(3-0)	.....
Physical Education, Phy. Ed. 234	5(5-0)	.....	.....
Physical Ed., Phy. Ed. 220a, 220b .....	.....	1(0-2)	1(0-2)
Educational Psychology, Ed. 231	3(3-0)	.....	.....
Economics, Ec. 231, 234 .....	.....	5(5-0)	5(5-0)
	<hr/> 20 hrs.	<hr/> 19 hrs.	<hr/> 19 hrs.

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Industrial Lab., V. I. Ed. 341, 342, 343....	7(2-10)	7(2-10)	7(2-10)
Principles of Sociology, Soc. 231	5(5-0)	.....	.....
Materials, Equipment, and Shop Management, I. A., Ed. 347 .....	.....	3(3-0)	.....
Methods of Teaching Industrial Education, Ed. 343 .....	.....	5(5-0)	.....
Observation and Practice Teaching in Ind. Ed., Ed. 344 .....	.....	.....	5(5-0)

*Students who plan to become Trade Teachers take Option I.

Trade Analysis, Ed. 341	3(3-0)	.....	.....
Educational Psychology, Ed. 231	3(3-0)	.....	.....
Vocational Education, Ed. 331 .....	.....	3(3-0)	.....
Vocational Guidance, Ed. 332 .....	.....	.....	3(3-0)
Principles of Secondary Ed., Ed. 237	3(3-0)	.....	.....
	<hr/>	<hr/>	<hr/>
	18 hrs.	18 hrs.	15 hrs.

OPTION II**

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Industrial Lab. V. I., Ed. 331, 332, 333	7(2-10)	7(2-10)	7(2-10)
Public Speaking, Eng. 224	2(2-0)	.....	.....
Business Adm. 351, 353	5(5-0)	.....	5(5-0)
Contracts and Specifications, M. E. 327 ....	.....	.....	3(3-0)
Electives	3()	8( )	.....
Economics Ec. 231, 234 .....	.....	5(5-0)	5(5-0)
Mech. Drawing, Me. 323	3(0-6)	.....	.....
	<hr/>	<hr/>	<hr/>
	20 hrs.	20 hrs.	20 hrs.

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Industrial Lab. V. I., Ed. 341, 342, 343....	7(2-10)	7(2-10)	7(2-10)
Principles of Sociology, Soc. 231	5(5-0)	.....	.....
Materials Equipment and Shop			
Management I. A., Ed. 347 .....	.....	3(3-0)	.....
Business Adm. 337 .....	.....	.....	5(5-0)
Electives	6()	8()	6()
	<hr/>	<hr/>	<hr/>
	18 hrs.	18 hrs.	18 hrs.

COURSES IN INDUSTRIAL ARTS EDUCATION

321. General Woodwork

Care and use of hand tools, principles of planning, squaring and laying out work. Special projects assigned to students in accordance with the student's background with the use of hand tools only. Credit 5(0-10).

322. General Woodwork

Emphasis is placed on the practical operation of such machines as variety saw, band saw, radial saw, planer, mortiser, shaper, tenon machine, belt and drum sanding machines. Credit 5(0-10). Prerequisite: I. A. 321.

**Students who plan to go into business, take Option II.

323. Advanced Woodwork

Construction of projects from drawings or blueprints. Also care of power machines, saw filing, band saw brazing, sharpening and setting planer knives are part of the course. Prerequisite: I. A. Ed. 322. Credit 5(0-10).

324. Materials of Construction

A study of the manufacture and physical properties of iron, steel, timber, cement, concrete, and other materials encountered in technical fields, and the A. S. T. M., specifications and methods of testing. Prerequisite: Chem. 113. Credit 3(3-0).

325. Automobile Mechanics

This course takes in the maintenance and operation of the automobile, principles of the four-cycle engine, and the ignition system. Credit 3(0-6).

326. Electric Wiring

This course covers the fundamental principles of two- and three-wire circuits for light and power. It also considers the study of and use of electrical wiring materials and electrical codes. Credit 3(0-6).

327. General Electricity

Instruction and laboratory practice covering fundamental principles of direct and of alternating current equipment. Study of meters, motors, generators, armature winding and alternating current circuits. Study of home appliances are made an integral part of the course. Credit 3(0-6).

328. Electrical Projects

The intent of this course is to provide teachers of electricity in junior—or senior high schools with sufficient material and data to enable them to cope successfully with the problem of electrical projects for class construction. The course also gives the student a working knowledge of the more important principles upon which radio transmission and reception are accomplished. Credit 3(0-6).

331. Vocational Drawing

Correlation between mechanical drawing and shop projects. Elementary principles of industrial arts design. Prerequisite: M. E. 311, 312. Credit 3(0-6).

332. Vocational Drawing

Proportion, balance, and gracefulness in design of shop projects. Prerequisite: I. A. 331. Credit 3(0-6).

333. Vocational Drawing

Designing of school shops; selection and location of equipment with respect to use and economy. Prerequisite: I. A. 332. Credit 3(0-6).

338. Wood-turning

Thorough drill in the cutting action of turning tools and methods of holding them. Projects in spindle and in face plate turning are selected for practice. Instruction is also given in finishing and polishing on the lathe. Credit 3(0-6).

338A. Wood-turning

Instruction is given in elaborate and more intricate types of turning than are given in I. A. 338. Projects involving spherical and spiral turning are included. Credit 3(0-6).

339. Upholstery

Instruction includes caning and seat weaving method of upholstering a plain board surface, methods of fastening webbing, burlap and its uses, upholstery with springs, hard-edge upholstery, and spring edge upholstery. Credit 3(0-6).

339A. Upholstery

A continuation of 339, including construction or rebuilding of an upholstered project. Credit 3(0-6).

340. Wood Finishing

Instruction is given in the mechanical preparation of wood before staining, the preparation and use of stains and the application of different classes of commercial stains, kinds of fillers—their preparation and application, surface or refinishing coats, such as wax, oil, shellac, varnish, paint, and enamel. Credit 3(0-6).

340A. Wood Finishing

Refinishing, French polishing, and special work in finishing and polishing on the lathe. Credit 3(0-6).

341. History of Industrial Education

A foundation and orientation course in industrial education. Familiarizes the student with the underlying philosophy, the basic principles, the prevailing practices and the accepted terminology in trade and industrial educations. Credit 3(3-0).

347. Materials, Equipment and Shop Management

The problems of equipping and arranging trades and industrial art shops and the care of tools and materials, safety first, and management are discussed. Credit 3(3-0).

348. Comprehensive Shop Projects

The student will be required to engage in such practical work as his individual needs seem to warrant. This work may include general construction and/or repairs, maintenance work or advanced project involving wood turning, carving, inlaying, upholstering, and wood finishing. Credit 3(0-6).

COURSES IN VOCATIONAL INDUSTRIAL EDUCATION

The student must decide at the beginning of the second year the field of his major interest, and he must choose the industrial laboratory course suitable to that field. The field of interest is designated by the letter immediately following the course number; that is, V. I., Ed. 321-A would indicate that the student is pursuing his major work in the field of automobile mechanics.

The industrial laboratory courses 321, 322, 323, 331, 332, 333, 341, 342, 343 may be in automobile mechanics, carpentry, cabinetmaking and upholstery, masonry, mechanical drawing, plumbing and steam-fitting, shoe repairing, tailoring, machine shop practice, radio servicing and television.

Students in Vocational Industrial Education will spend one quarter during their senior year on the campus, where they will gain practical work relative to their field of study. They will be expected to contract for jobs, making out work orders, estimates, cost sheets and deliver the job complete to the customer. All work will be under the close supervision of the instructor and credit will be allowed for one of their Industrial Laboratory courses.

COURSES IN VOCATIONAL EDUCATION

331. Vocational Education

A foundation and orientation course in vocational education. Familiarize the student with a brief historical background of concepts and developments in vocational education. Emphasis is placed upon the need of vocational education in democracy. Special consideration is given to the study of the evolution of the underlying philosophy and basic principles of vocational education, as a phase of the general education program. Credit 3(3-0).

332. Vocational Guidance (Formerly 341)

The problem of vocational guidance, its beginning, organization and administration in high schools. Special attention will be given to guidance in the Junior and Senior high school as it relates to the work of Industrial Arts. Fall. Credit 3(3-0).

341. Trade Analysis (Formerly 332)

This course gives the students a knowledge of organizing trades and industrial arts courses. Emphasis is put on the selection of a line of useful and practical projects and the grouping of these projects in the order of their learning difficulties. Spring. Credit 3(3-0).

343. Methods of Teaching Industrial Education

Fundamental factors in teaching, agencies of education, classroom management, selection of problems and projects, job sheets and lesson plans. Winter. Credit 5(5-0).

344. Observation and Practice Teaching in Industrial Education

Practical experience in conducting unit trade and industrial arts programs will be afforded. Spring. Credit 5(5-0). (See also I. A. 341.)

GRADUATE PROGRAM IN INDUSTRIAL EDUCATION

Graduate work in industrial education aims to aid the promotion of industry by providing advanced technical training for those who plan to follow industrial careers and for teachers of industrial arts education or vocational industrial education. The department offers instruction for the following types of students: (1) those in the field who desire advanced training as teachers or supervisors of unit and general industrial arts shops in junior and senior high schools; and in schools of the smaller communities; (2) experienced tradesmen with the necessary teaching requirements who desire additional training in the development and conduct of programs of industrial education, especially those established under the Smith-Hughes Act; (3) teachers of related or cognate subjects; (4) others who desire further training in these fields.

A. For Teaching certificates**1. Required courses**

Ed. 601. Theory of American Public Education..Credit 3(3-0)

Ed. 605. Teaching PrinciplesCredit 3(3-0)

Ed. 606. The CurriculumCredit 3(3-0)

Ed. 621. Educational PsychologyCredit 3(3-0)

Ed. 622. Measurements and EvaluationCredit 3(3-0)

Ed. 612. Techniques and Methods of Research...Credit 3(3-0)

Guid. 601. The Field of GuidanceCredit 3(3-0)

2. Subject-matter courses according to certificate.....18 Q.H.

3. Electives and Thesis 6 Q.H.

Programs in certain other graduate departments will be outlined, on request, by the Major Professor of the department and the Chairman of the Graduate Committee.

SUBJECT-MATTER COURSES IN INDUSTRIAL EDUCATION

Hist. 504. Economic and Industrial History of the United States
or

Hist. 505.

504. Foundations of Industrial Education

602. Current Problems in Industrial Education

603. Industrial Psychology

604. Supervision and Administration in Industrial Education

605. Curriculum Laboratory in Industrial Education

606. Research Problems in Industrial Education

620. Co-operative Training

- 624. Laboratory Planning for Industrial Shops
- 631. General Industrial Education Programs
- 632. Seminar in Industrial Education
- 634. Workshop in Industrial Education

NOTE: For general requirements for the Master of Science degree, see page 67.

520. Foundations of Industrial Education

(Advanced Industrial History). Deals with the industrial evolution of the United States. The roots of the present age of machinery are sought in English backgrounds—in the manor system, the markets and fairs, the rise of towns, the guilds, the development of capital, the introduction of power driven machinery and the establishment of the factory system. Special emphasis upon developments in America and their effect upon vocational education in this country. Credit 3(3-0).

602. Current Problems in Industrial Education

Problems involving the analysis of objective, curriculum content, types of equipment, and outcomes studied. Suggestions are considered for improving current practices. Projects in industrial relations, public relations, records and forms, literature in the area of industrial education, improvement of instruction, teaching aids and devices. Credit 3(3-0).

603. Industrial Psychology

Application of principles of psychology to problems as industrial organization, management, production and efficiency. Credit 3(3-0).

604. Supervision and Administration of Industrial Education

Relation of industrial education to the general curriculum and the administrative responsibilities entailed. Courses of study; relative costs; coordination problems; class and shop organization, and the development of an effective program of supervision. Selection of teachers and their improvement in-service. Of interest to school administrators, teachers of industrial arts, and vocational-industrial subjects. Credit 3(3-0).

605. Curriculum Laboratory in Industrial Education

Reviews the basic principles of the preparation of instructional materials for actual shop and classroom use. Each student, or group of students, selects some significant area of instruction and develops for this area for actual use in a shop or related subject class. Courses of study that function in actual teaching situations are prepared and it is anticipated that each student will be able to take away with him a course of study that actually meets the needs of his community. Throughout the laboratory method is used, supplemented by demonstrations, field trips, visits to industries. Opportunity is afforded to analyze existing courses of study. Credit 3(3-0).

606. Research Problems in Industrial Education

Conferences and studies using the several laboratories of the college as a basis for research. Individual or group studies may be selected to meet the needs of the individual or group as suggested by: Pupil study; Instructional Material; experiment and development of programs with the publication of either a professional bulletin or technical manual as a goal. Credit 3(0-6) to 6(0-12).

620. Co-operative Training

This course is designed to give the prospective teachers of vocational education a knowledge of the basic concepts and processes of co-operative work in general, with special attention to diversified occupations. Credit 3(3-0).

624. Laboratory Planning for Industrial Shops

Study of the principles involved in the design, selection, location, installation, and care of equipment suitable for high school industrial arts laboratories or vocational industrial departments. Credit 3(3-0).

631. General Industrial Education Programs

Development on local, state, and national levels of day industrial schools, evening industrial schools, part-time day and evening schools. Their organization types, courses of study, scope of movement, study of special student groups, fees and charges, buildings and equipment. Credit 3(3-0).

632. Seminar in Industrial Education

Investigations and discussions for advanced and mature persons who have experience as teachers, supervisors, or principals, and are in direct contact with one or more phases of industrial education. Credit 3(3-0).

634. Workshop in Industrial Education

Individual and group problems will be undertaken, through organized and scientific effort to exhaust all possible resources for their solutions. These procedures may include, the experiences of the supervisor and individuals of the group, library research, field trips, movies or any pertinent related source or sources. The ultimate aim is to arrive at a functional conclusion with the best possible solution for publication. Credit 3(3-0).

DEPARTMENT OF MATHEMATICS

All freshmen are required to take a placement test in mathematics. Those failing this test must register for Mathematics 309.

A minimum of ten hours of mathematics is required for graduation from all schools.

The following is suggested for those desiring a major and is recommended for those planning to do research work, graduate study or teach.

Those persons pursuing mathematics as a major should take Mathematics 313 in the freshman year and Physics 323 during their sophomore year.

(For Freshman and Sophomore Courses, See Page 64.)

MAJOR IN MATHEMATICS

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Calculus, Math. 321, 322, 323	5 (5-0)	5 (5-0)	5 (5-0)
Math. 314, 324 .....	.....	5 (5-0)	3 (1-4)
Minor or Electives	10 (10-0)	5 (5-0)	10 ()

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Differential Equations, Math. 331 .....	.....	5 (5-0)	.....
Theory of Equations, Math. 316 .....	.....	.....	5 (5-0)
Mechanics, Math. 326	5 (5-0)	.....	.....
Mathematics, Math. 325 .....	.....	.....	5 (5-0)
Minor or Electives	10 ()	10 ()	5 ()

MATHEMATICS

Engineering Mathematics

(See First Year's Curricula of Mechanic Arts, Page 60.)

Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Math. 321, 322, 323	5 (5-0)	5 (5-0)	5 (5-0)
B. A. 335	5 (5-0)	.....	.....
Phy. Ed. or Mil. Sci.	2 (2-2)	2 (2-2)	2 (2-2)
Math. 314, 316 .....	.....	5 (5-0)	5 (5-0)
Physics 321, 322, 323	5 (3-4)	5 (3-4)	5 (3-4)
	<hr/> 17 hrs.	<hr/> 17 hrs.	<hr/> 17 hrs.

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
French 211, 212, 213	5 (5 0)	5 (5 0)	5 (5 0)
Math. 318, 331, 501	5 (5-0)	5 (5-0)	5 (5-0)
M.E. 331, 332, 333	5 (5-0)	5 (5-0)	5 (5-0)
Physics 332, 351, 352	5 (5-0)	5 (5-0)	5 (5-0)
	<hr/> 20 hrs.	<hr/> 20 hrs.	<hr/> 20 hrs.

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Math. 504 .....	.....	.....	5(5-0)
Math. 324 .....	.....	.....	3(1-4)
Chemistry 141, 142	6(3-6)	6(3-6)	.....
Physics 334, 335	5(1-4)	5(1-4)	.....
Electives	5()	5()	8()
	<hr/> 16 hrs.	<hr/> 16 hrs.	<hr/> 16 hrs.

COURSES IN MATHEMATICS

309. Remedial Mathematics

This course is designed to strengthen and review the student in the fundamentals of arithmetic, plane geometry, and algebra. Students who fail to pass the placement test are required to pass this course in addition to the regular mathematics requirements. Credit 3(3-0).

311. College Algebra

Review of elementary topics, such as factoring, fractions, simple equations, exponents, and radicals. Other topics studied are quadratics, simultaneous quadratic equations, logarithms, binomial theorem progression, determinants and permutation. Prerequisite: High School Algebra. Credit 5(5-0).

312. Trigonometry

Functions of angles and their practical applications to solution of problems, relations of acute logarithms of numbers and trigonometric functions, solutions of the right and oblique triangles by logarithms. Prerequisites: College Algebra and Plane Geometry. Credit 5(5-0).

313. Analytic Geometry

A thorough study of cartesian co-ordinates, curves, loci, straight line, circle, polar co-ordinates and conic sections completes the plane analytic geometry. Co-ordinates in space, loci, the plane and the straight line completes the course. Prerequisite: Math 312. Credit 5(5-0).

314. History of Mathematics

The History of Mathematics: This course is designed as an aid in the preparation of teachers of mathematics and includes a survey of the development of mathematics by chronological periods, with biographical references, illustrations of national and racial achievements, and discussions of the evolution of certain important topics of elementary mathematics. Credit 5(5-0).

315. Mathematics of Business

A basic course offered primarily for students of Business Administration. A study of elementary principles of mathematics as applied to investments, sinking funds, annuities, insurance, etc. The course is begun with a thorough study of interests—simple and compound. Credit 5(5-0).

316. Theory of Equations

Methods of solving cubics quartics and other higher algebraic equations. Methods of approximating roots, systems of equations, elements of determinants. Prerequisite: Math. 313. Credit 5(5-0).

318. Elementary Mathematical Statistics

A general course covering the use of graphs, frequency distributions, averages, measures of dispersion, etc., with an introduction to sampling and correlation; a basic course for all fields of application. Prerequisites: Math. 311, 315 and approval of instructor. Credit 5(5-0).

321. Differential Calculus

The fundamentals of differential calculus; maxima and minima; rates; curve tracing and application of derivatives, etc. Prerequisite: Math. 313. Credit 5(5-0).

322. Integral Calculus

Fundamentals of integral calculus, application of integrals to measurements of arcs, areas, and volumes, etc. Prerequisite: Math. 321. Credit 5(5-0).

323. Differential and Integral Calculus

A continuation of integral calculus. Solution of equations, application of integrals, center of gravity, moments of inertia, double and triple integration. Prerequisite: Math. 322. Credit 5(5-0).

324. Surveying

The method of using the compass, transit, tape and level in making plane surveys. Lectures and field work. Elementary stadia work. Prerequisite: Math 312. Credit 3(1-4).

325. Survey Course in Mathematics

A brief study of the meaning of the basic ideas of arithmetic, algebra, trigonometry, analytical geometry and calculus, and their relation to each other. Recommended for those who plan to teach mathematics. This course will not serve as a prerequisite for any other courses in mathematics. Prerequisite: Math. 323. Credit 5(5-0).

326. Mechanics

Prerequisite: Math. 321. Credit 5(5-0).

331. Differential Equations

Solution of standard types of differential equations. Emphasis given on application to numerous examples in electricity and mechanics. Prerequisite: Math. 323. Credit 5(5-0).

335. Applied Math

This course consists of application of mathematics to practical problems that may arise in the field and shop. It helps the students to apply their mathematics to everyday problems. Credit 3(3-0).

336. Applied Math

Continuation of 335 with emphasis placed on problems in respective fields, Prerequisite: 335. Credit 3(3-0).

Advanced Undergraduates and Graduates**501. Vector Analysis**

A study of the processes of vector analysis, with a treatment of the vector functions and operations as applied in theoretical work. Prerequisite: Math. 323. Credit 5(5-0).

502. Mathematics of Life Insurance

Probability, mortality tables, life insurance, annuities, endowments, computation of net premiums, evaluation of policies, construction and use of tables. Credit 3(3-0).

503. Differential Equations

Formulation of practical problems as solutions of differential equations, method of solving type forms, systems of equations, singular solutions, methods of approximation, an introduction to partial differential equation. Credit 5(5-0).

504. Numerical Computation

Interpolation, numerical solution of equations, approximations, numerical integration, construction of tables. Credit 3(3-0).

506. Advanced Calculus

Review of differentiation and integration, approximation of integrals, partial derivatives, line integrals, integral theorems, applications to geometry, physics and mechanics. Credit 5(5-0).

507. Mathematical Statistics

Averages, moments, correlation, probability, the normal and Poisson's distribution, the Gram-Charlier series, the distribution of statistics, sampling of populations, the Lewis theory, Sheppard's corrections, maximum likelihood, and other selected topics. Credit 3(3-0).

DEPARTMENT OF MECHANICAL ENGINEERING

This curriculum offers a broad training in the scientific principles underlying mechanical engineering and correlates this by application to specific fields of machine design, heat power, heating, ventilation, refrigeration, thermodynamics, industrial management and manufacturing problems.

Lectures and class instruction are supplemented by laboratory investigations designed to emphasize the engineering and economic principles involved. Students admitted without credit in solid geometry will be required to take it during the freshman year without credit.

CURRICULUM

Freshman Year

(See First Year's Curricula of Mechanic Arts, Page 60.)

Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
✓ Physics 321, 322, 323	5 (3-4)	5 (3-4)	5 (3-4)
✓ Mathematics 321, 322, 323	5 (5-0)	5 (5-0)	5 (5-0)
Military Science 221, 222, 223	2 (2-2)	2 (2-2)	2 (2-2)
✓ Machine Shop Practice, M. E. 328, 329, 330.	2 (0-4)	2 (0-4)	2 (0-4)
✓ Mechanical Drawing 323	3 (0-6)	.....	.....
✓ Mechanism M. E. 321	.....	.....	4 (3-2)
✓ M. E. 317	3 (0-6)	.....	.....
Economics 231	.....	5 (5-0)	.....
✓ Surveying Math. 324	.....	.....	3 (1-4)
	<hr/> 20	<hr/> 19	<hr/> 21

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
✓ Electrical Engineering 321, 322, 323	5 (3-4)	5 (3-4)	5 (3-4)
✓ Mechanics, M. E. 331, 332, 333	5 (5-0)	5 (5-0)	5 (5-0)
✓ Heat Power Engineering, M. E. 336	.....	5 (5-0)	.....
✓ Heating and Ventilating, M. E. 334, 335	3 (3-0)	3 (3-0)	.....
Materials of Construction, I. A. 324	3 (3-0)	.....	.....
Thermodynamics, M. E. 326	5 (5-0)	.....	.....
✓ Economics 234	.....	.....	5 (5-0)
✓ Hydraulics M. E. 337	.....	.....	3 (3-0)
	<hr/> 21	<hr/> 18	<hr/> 18

Senior Year			
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Machine Design, M. E. 341, 342, 343.....	5 (5-0)	5 (3-4)	5 (3-4)
Heat Power Engineering, M. E. 344, 345...	5 (4-2)	5 (3-4)	5.....
Contracts and Specifications, M. E. 327....	.....	.....	3 (3-0)
Internal Combustion Engines, M. E. 338..	.....	5 (5-0)	.....
Mechanical Engineering			
Laboratory, M. E. 351, 352.....	.....	3 (0-6)	3 (0-6)
Testing Materials Lab., M. E. 346.....	2 (0-4)	.....	.....
Metallurgy, M. E. 339	3 (3-0)	.....	.....
Electives	3 hrs.	.....	8 hrs.
	18	18	19

Suggested Electives

Commercial Law, B. A. 335
Differential Equations, Math. 331
Economics, Ec. 232
Structures, A. E. 334
Hydraulic Machinery, M. E. 347

DESCRIPTION OF COURSES

311. Mechanical Drawing

Instruction in proper use of drafting instruments and materials. Lettering. Applied Geometry. Emphasis placed upon accuracy and neatness. Credit 3 (0-6).

312. Mechanical Drawing

Continuation of M. E. 311. Fundamentals required for machine drawing including applied Geometry, Orthographic projection. Pictorial representation including isometric and oblique drawing. Sections. Prerequisite: M. E. 311. Credit 3 (0-6).

314. Descriptive Geometry

Theory of projection: Solution of Theoretical and practical problems involving size, shape, and relative position of common geometrical magnitudes such as points, lines, planes, curved surfaces and solids. Surface development and intersection. Credit 3 (1-4).

317. Pattern Making

Care and use of tools, principles of planing, squaring and laying out work. Laboratory practices and modern methods of pattern making. Woods used, glued joints, methods of building up draft shrinkage, coating and storage. Small individual projects. Credit 3 (0-6).

321. Mechanism

A study of various types of mechanisms employed in the design of machines such as linkages, belting, cams and followers, gears, cones and wheel trains. Prerequisite: M. E. 323, Math. 313, Physics 321. Credit 4(3-2).

323. Mechanical Drawing

Drawing for the shop. Metal fastenings, springs, gears, detail and assembly drawings, tracings, methods of reproducing drawings. Prerequisite: M. E. 314. Credit 3(0-6).

326. Thermodynamics. Same as Physics 332**327. Contracts and Specifications**

Elementary principles of contracts involving bids and bidders; methods of payment for contracts and extra work; preparation and writing of specifications. Prerequisite: Eng. 213. Credit 3(3-0).

328. Machine Shop Practice

A study of the theory, construction and operation of various machine tools, such as lathes, milling machines, shapers and the use of special tools and measuring instruments. Prerequisite: M. E. 311. Credit 2(0-4).

329. Machine Shop Practice

Construction of some project requiring the use of various machine tools and measuring instruments. Prerequisite: M. E. 328. Credit 2(0-4).

330. Machine Shop Practice

Continuation of M. E. 329. Credit 2(0-4).

331. Mechanics

Static, analytical and graphic treatment of concurrent, nonconcurrent systems of coplanar and non-coplanar forces, and parallel forces, couples, stresses in frames and trusses. Distribution forces, center of gravity, moment of inertia and radii of gyration of plane areas and solids. Prerequisite: Physics 321, Math. 323. Credit 5(5-0).

332. Mechanics

Dynamics and Kinetics, Rectilinear and curvilinear motion of a particle, relative velocities and acceleration, rotary motion of a body, work and energy, plane motion of a body, impact, moment of momentum. Prerequisite: M. E. 331. Credit 5(5-0).

333. Strength of Materials

Shear and bending moment diagrams, stresses in beams, shafts, and columns. Combined stresses, deflection in beams, reinforced concrete beams, fiber stresses in beams and their distribution. Tension, compression and torsion. Prerequisite: M. E. 332. Credit 5(5-0).

334. Heating and Ventilating

A study of the theory, design and installation of hot air, direct and indirect steam, hot water and fan heating systems; central heating and temperature control. Computations for heat losses and size of principal equipment. Layout of piping, ducts and auxiliary apparatus. Lectures, recitations. Credit 3(3-0).

335. Heating and Ventilating

Continuation of 334 with special attention given to air analysis and air conditioning. Discussion of methods of air refrigeration, distribution, humidity control and conditioning equipment. Lectures, recitations. Credit 3(3-0).

336. Heat Power Engineering

A description and analytic study of the principles involved in the application and utilization of heat in the steam boiler, steam engine, steam turbine and power plant auxiliaries, elementary thermodynamics, fuels and combustion. Prerequisite: Physics 332. Credit 5(5-0).

337. Hydraulics

Elementary principles of hydrostatics and hydrokinetics; laws of statics; dynamic pressure, flow of water through orifices, tubes, nozzles, weirs, pipe lines and open channels, hydraulic friction and accompanying losses; water measurements in pipes and open channels. Prerequisite: M. E. 332; Physics 322. Credit 3(3-0).

338. Internal and Combustion Engines

A study of the Otto and Diesel type of engines and their auxiliaries; fuel performance; design, applications and economics. Discussions, problems. Prerequisite: Physics 332. Credit 5(5-0).

339. Metallurgy

Production of refined ferrous and non-ferrous metals from their ores; properties of metals and alloys as related to structure and treatment; heat treatment; microscopic examination; casting, shaping and welding. Prerequisite: Chem. 113. Credit 3(3-0).

341. Machine Design

A study of the properties of materials, the stresses in machine parts and procedures in design calculations. Lectures, recitations and problems. Prerequisite: M. E. 321 and 333. Credit 5(5-0).

342. Machine Design

Design of machine elements involving a consideration of static and dynamic forces, critical speeds and the application of the theories of strength and resistance of materials. Lectures, recitations and design periods. Prerequisite: M. E. 341. Credit 5(3-4).

343. Machine Design

A study of the design of gears and gear trains, shafts, screw, springs, clutches and castings. Prerequisite: M. E. 342. Credit 5(3-4).

344. Heat Power Engineering

A study of modern central and isolated power plants, fuels, combustion, boilers, settings, stoker, fuel and ash conveying systems and experimental tests. Prerequisite: M. E. 336. Credit 5(4-2).

345. Heat Power Engineering

Continuation of M. E. 344 with special attention given to steam engines, steam turbines, condensers, pumps, economics of power plants and experimental tests on various plant auxiliaries. Credit 5(3-4).

346. Testing Materials Laboratory

Laboratory work devoted to experiments and standard tests on various engineering materials, including steel, iron, wood, brick, sand, gravel, cement and concrete. Prerequisite: M. E. 333. Credit 2(0-4).

347. Hydraulic Machinery

A study of the theory, construction and operating characteristics of the principal types of hydraulic machinery. Lectures, recitations problems. Credit 3(3-0).

351, 352. Mechanical Engineering Laboratory

The testing of steam and internal combustion engines and equipment, calibration of instruments. Advanced experimental study in the field in which the student is interested. Prerequisite: M. E. 341, 344. Credit 3(0-6), 3(0-6).

MILITARY SCIENCE AND TACTICS RESERVE OFFICERS' TRAINING CORPS

Section I—General

A Senior (CC) Civilian College type of unit, Reserve Officers' Training Corps is organized at this Institution under authority of amended Sections 40-47c of the National Defense Act.

The mission of the Senior ROTC is to produce Junior Officers who have the qualities and attributes essential to their progressive and continued development as officers in the Army of the United States, and to lay foundations for intelligent citizenship.

Two years of military science are required of all able bodied male students. Subject to conditions outlined in Section II. All Freshman and Sophomore students may be required by the College to participate in

two years of military training which the Department of the Army will encourage and assist; but not necessarily as fully enrolled members of ROTC.

The Senior ROTC program will consist of two parts: (1) Basic course and (2) Advanced course which includes a 6 week summer camp period. The Basic course will consist of formal instruction for a minimum of 3 hours per week for 2 academic years. The Advanced course will consist of formal instruction for a minimum of 5 hours per week for 2 academic years.

Section II—Conditions for Enrollment in ROTC

1. General Conditions

- (1) Be a citizen of the United States and not less than 14 years of age.
- (2) Physically qualified under standards prescribed by Department of the Army.
- (3) Accepted by the college as a regularly enrolled student of Institution.
- (4) Successfully complete such general survey or screening test as may be prescribed.

2. Conditions for Enrollment in Basic Course

- (1) All general conditions listed in 1 above.
- (2) Not have reached 23 years of age at time of initial enrollment, except that an age limit of 25 will apply to veterans of World War II enrolling prior to Jan. 1, 1951.
- (3) Must have at least 2 academic years remaining in their course at this Institution.

3. Conditions for Enrollment in the Advanced Course

- (1) All general conditions listed in 1 above.
- (2) Not have reached 27 years of age at time of initial enrollment.
- (3) Be selected by the Professor of Military Science & Tactics and the President of the Institution.
- (4) Have completed the basic course Senior ROTC, or received credit in lieu thereof on basis of prior service in the Armed Forces.
- (5) Execute a written agreement with the Government, (Contract), to complete course of instruction, attend a 6 weeks' period of summer camp, and to accept a commission if offered. The contract will expire if the student's attendance at school is interrupted for more than two calendar years.
- (6) Maintain satisfactory scholastic standing required by College in academic and ROTC work.

Section III—Military Science

Courses of Instruction

Training in Military Leadership is emphasized with instruction being given in subjects common to All Branches.

First Year Basic Course. M.S. 211, 212, 213

Military Organization; Military Policy of the U. S.; National Defense Act and ROTC; evolution of warfare; maps and aerial photos; military psychology and personnel management; first aid and hygiene; geographical foundations of national power; military problems of the United States; military mobilization and demobilization; leadership, drill and exercise of command: 211 Fall; 212 Winter; 213 Spring. Credit 2(2-2) Each Quarter.

Second Year Basic Course. M.S. 221, 222, 223

Military organization, weapons, marksmanship, technique of fire of the rifle squad, leadership, drill and exercise of command. 221 Fall; 222 Winter; 223 Spring. Credit 2(2-2) Each Quarter.

First Year Advanced Course. M.S. 231, 232, 233

Military organization, weapons, gunnery, communications, combat intelligence, estimate of the situation and combat orders, field fortifications, tactics of the rifle and heavy weapons platoons and companies, leadership, drill and exercise of command. 231 Fall; 232 Winter; 233 Spring. Credit 5(4-2) Each Quarter.

Second Year Advanced Course. M.S. 241, 242, 243

Military organization, command and staff, communications, motors and transportation, supply and evacuation, troop movements, new developments, the military team, tactics—the infantry battalion in attack and defense, military administration and personnel management, military teaching methods, psychological warfare, leadership, drill and exercise of command. 241 Fall; 242 Winter; 243 Spring. Credit 5(4-2). Each Quarter.

The program and/or courses are subject to change by the Department of the Army directives.

Section IV—Uniforms and Equipment

All regularly enrolled members of this Senior ROTC are furnished by the Government free of cost, uniforms, equipment and text books. The student is responsible for the care, safeguarding, and cleaning of property issued to him. He is financially responsible for the loss, excessive wear, breakage due to carelessness or unauthorized use of clothing and equipment. Each student is required to have a certificate countersigned by his parents or guardian to insure that the Government is re-

imbursed in case the above regulations are violated. All ROTC property must be returned to the Military Property Custodian at end of school year or when a student withdraws from School.

Credit for Previous Military Service or Training

For previous honorable military service or training in Army, Navy, Marine Corps or Coast Guard of the U. S. credit may be allowed, subject to approval of President and the PMS&T, within the following limits:

(1) For 12 months or more service credit not to exceed the entire basic course of the Senior ROTC.

(2) For six months or more service credit not to exceed the first year of the basic course.

For additional information contact ROTC Headquarters located on the campus.

DEPARTMENT OF MUSIC

Music is recognized as an important part of life. The principal and ultimate aim of our courses in music is directed toward the development of interest and a sincere desire to understand and appreciate more fully all types of music. The curriculum is designed to give the student a thorough training so that he will be prepared to teach music, to continue the study of music after the completion of these courses, and to be an influencing factor in the cultural development of his community.

Suggested Outline of Courses for Majors and Minors in Band Music

For regular freshman curriculum see page 64.

Freshman Year		<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
211, 212, 213	Elementary Music			
	Appreciation	2 (1-2)	2 (1-2)	2 (1-2)
214, 215, 216	Musicianship	3 (2-2)	3 (2-2)	3 (2-2)
240-1a, 240-1b, 240-1c	Senior Band	2 (0-5)	2 (0-5)	2 (0-5)

Select eleven to thirteen hours from regular freshman curriculum.
Page 64.

Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
221, 222, 223 History of Music.....	3 (3-0)	3 (3-0)	3 (3-0)
224, 225, 226 Elementary Harmony	5 (5-0)	5 (5-0)	5 (5-0)
240-2a, 240-2b, 240-2c Senior Band	2 (0-5)	2 (0-5)	2 (0-5)

Select ten to twelve hours from sophomore curriculum on page 64.

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
217 Percussion Instruments	2 (1-2)	.....	.....
218 Woodwind Instructions .....	.....	2 (1-2)	.....
219 Brass Instruments .....	.....	.....	2 (1-2)
231, 232, 233 Advanced Harmony	5 (5-0)	5 (5-0)	5 (5-0)
234, 235, 236 Public School Methods	5 (5-0)	5 (5-0)	5 (5-0)
240-3a, 240-3b, 240-3c Senior Band	2 (0-5)	2 (0-5)	2 (0-5)
Electives	8 (8-0)	8 (8-0)	8 (8-0)

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
237 Elementary Conducting	3 (1-4)	.....	.....
244a, 244b, 244c Band Technics	2 (1-2)	2 (1-2)	2 (1-2)
247a, 247b, 247c Band Arranging	2 (2-0)	2 (2-0)	2 (2-0)
240-4a, 240-4b, 240-4c Senior Band	2 (0-5)	2 (0-5)	2 (0-5)
Electives	6 (6-0)	8 (8-0)	5 (5-0)

This outline of courses should be worked in with the required courses for all students in the School of Education and Science. All students should remember that most courses in Music are in sequence, and each sequence should be started in the Fall quarter. Minors in the field of Band Music may omit the following courses: Advanced Harmony 231, 232, 233 and Elementary Conducting 237. It should be especially noted that all majors and minors in Band Music will be required to play in one of the bands throughout the four years.

A course in instrumental music designed to prepare students to organize and train high school bands is available to qualified persons. Those interested should apply to the band director and be prepared to take a preliminary examination upon entering.

All persons interested in either major or minor in Band Music are encouraged to take piano lessons for at least the first two years. The monthly fee is listed under EXPENSES AND FEES, page 48.

COURSES OF INSTRUCTION

MUSIC APPRECIATION AND HISTORY

Six hours of Music Appreciation or Art Appreciation are required for graduation in the School of Education and Science. These must be taken in the freshman year.

211. Music Appreciation

This course aims to provide a general cultural background for the listener and includes a study of rhythm, harmony, melody, simple form, vocal music, incidental music and the orchestra. Credit 2(1-2).

212. Music Appreciation

This course covers a study of classicism and romanticism, program and descriptive music, sonata form and the symphony. Credit 2(1-2).

213. Music Appreciation

This course deals with the more difficult aspects of listening: chamber music, the violin and piano sonata, Bach and the polyphonic style, Impressionism, Expressionism and modern music.

221. History of Music

Music of the eighteenth century is carefully studied and examined. Credit 2(1-2).

222. History of Music

Music of the nineteenth century is carefully studied and examined. Credit 2(1-2).

223. History of Music

Music of the twentieth century is carefully studied and examined. Credit 2(1-2).

THEORY

214. Musicianship

This course includes a study of the system of notation, all major and minor keys, scales, intervals, and triads. Credit 3(2-2).

215. Musicianship

This is a continuation of 214, and work is begun in ear training and sight-singing. Credit 3(2-2).

216. Musicianship

This is a continuation of 215 with more advanced work being given in ear training, sight-singing, and terminology. Credit 3-(2-2).

HARMONY**224. Elementary Harmony**

This course includes a review of all major and minor scales, intervals, triads, and their inversions, in addition to advanced work at the keyboard, and exercises in ear training and dictation. Credit 5(5-0).

225. Elementary Harmony

This course includes the study of inversions of primary and secondary chords, sevenths, and simple modulations. Credit 5(5-0).

226. Elementary Harmony

This is a continuation of 225, introducing elements of composition as well as providing advanced work in ear training and dictation. Credit 5(5-0).

231. Advanced Harmony

This is a continuation of 226 and includes a study of modulations, chromatic alterations, ornaments, keyboard, ear training, and dictation. Credit 5(5-0).

232. Advanced Harmony

This is a continuation of 231. Harmonic and formal analyses are started in addition to intensive practice in keyboard, ear training, and dictation. Credit 5(5-0).

233. Advanced Harmony

This is a continuation of 232. Exercises in part-writing are regularly assigned. Credit 5(5-0).

MUSIC EDUCATION**234. Public School Methods**

This course deals with the materials and methods for teaching in the primary grades. Credit 5(5-0).

235. Public School Methods

This course deals with the materials and methods for teaching in the grammar grades. Credit 5(5-0).

236. Public School Methods

This course deals with the materials and methods for teaching in the junior high and high school. Credit 5(5-0).

CONDUCTING**237. Elementary Conducting**

This course includes the study of the technique of the baton and the study of the different forms for the purpose of conducting. Some time

is devoted to the problems of score-reading. An opportunity is given for practical experience in conducting both vocal and instrumental groups. Credit 3(1-4).

BAND MUSIC

210abc. Beginners' Band

This band is primary for any student who desires to learn to play an instrument or for minors in Band Music who desire to change instruments after entering college. Credit 1(0-5) each quarter.

217. Percussion Instruments

The percussion instruments are studied, and the proper methods for teaching these instruments are carefully analyzed. Credit 3(2-2).

218. Woodwind Instruments

The woodwind instruments are studied, and the proper methods for teaching these instruments are carefully analyzed. Credit 3(2-2).

219. Brass Instruments

The brass instruments are studied, and the proper methods for teaching these instruments are carefully analyzed. Credit 3(2-2).

220abc. Intermediate Band

This band is primarily for those students who have passed Music 210abc, or who have had less than three years of instrumental experience, or who have been advised to join by the band director. Credit 1(0-5) each quarter.

240-1abc. Senior Band

This band is primarily for students planning to major or minor in Band Music and is open to qualified freshmen who have had at least two years of previous training in a band instrument. This is the College Concert and Marching Band, and regular attendance is required at all rehearsals and public performances. Credit 2(0-5) each quarter.

240-2abc. Senior Band

This band is for qualified sophomores. Credit 2(0-5) each quarter.

240-3abc. Senior Band

This band is for qualified juniors. Credit 2(0-5) each quarter.

240-4abc. Senior Band

This band is for qualified seniors. Credit 2(0-5) each quarter.

244a. Band Technics

The student learns about school band organization and administration. Credit 2(1-2).

244b. Band Technics

The student has an opportunity to do practical work in the teaching of percussion, woodwind, and brass instruments under the guidance of the Band Director. Credit 2(1-2).

244c. Band Technics

The student is given an opportunity to work with the college band and ensemble groups. Some time may be spent working with outside organizations for practical experience. Credit 2(1-2).

247a. Band Arranging

This course includes a practical study of all instruments and the art of writing for small combinations of instruments. Credit 3(2-2).

247b. Band Arranging

This is a continuation of 247a. The student writes for combinations of instruments although sectional writing is stressed. Credit 3(2-2).

247c. Band Arranging

The student learns to score for full band. As a class project one composition will be scored for full band. Credit 3(2-2).

DEPARTMENT OF PHYSICAL EDUCATION

The general physical education program aims to promote the health, physical and mental efficiency of each student enrolled in the college and to provide carry-over interests and activities for all. A Health examination is given to each new student before he matriculates so as to determine his needs in physical education.

Unless officially excused by the college physician two class periods each week are required of all students. Juniors and seniors are permitted to elect their activity classes if all of the health, posture, and credit requirements have been met.

Students must be prepared, upon matriculation, to place their orders for the activity uniforms, the approximate cost for which is \$9.00 for men and \$8.00 for women.

INTRAMURALS

A program of intramural activities is conducted, on an elective basis, for all students. Schedules and tournaments are arranged, and equipment is made available by the physical education majors.

Varsity Athletics

The intercollegiate athletic program is under the supervision and direction of the Athletic Committee, consisting of faculty, alumni and students. The student members are appointed to the committee by the college president, on the basis of merit and achievement. The sports included in the program are: football, basketball, baseball, track, boxing and tennis. The college is a member of the Colored Intercollegiate Athletic Association and is subject to the rules and regulations of that body.

The Varsity letter shall be awarded by the Athletic Committee, upon recommendation of the coaching staff, to members of the football and basketball teams who have participated in a minimum of one-half of the total number of periods played in intercollegiate competition. In baseball, participation in one-half of the total number of innings played is required with the exception of: for pitchers who must have participated in at least one-fourth of the total number of innings played in intercollegiate competition. In the remaining sports, the award is made to the athlete who participates through the season with credit, with a provision that: to members of the track team who win two points in the conference or intersectional meets; to members of the tennis team who have won at least two matches in the conference tournament; and, to members of the boxing team who have won at least two matches in the conference tournament. The Varsity letter is awarded to members of the cheering squad who serve with credit.

General Activity Physical Education Courses

The general courses in physical education, based upon the physical examination given at the beginning of the year, are required of all freshmen and sophomore men and women. A wide variety of athletic sports and games is provided to meet the needs and interests of the student and to acquaint him with many activities in the field of physical education. Special attention is given toward developing skills and an understanding of rules.

Courses for Women

Freshman

210a. Soccer and Speedball. Fall. Credit 1(0-2).

210b. Basketball. Winter. Credit 1(0-2).

210c. Softball and Volleyball. Spring. Credit 1(0-2).

213. Personal Hygiene. (Required of all Freshmen)

Consideration is given to personal and mental hygiene with a view to establishing within the student a basis for positive health and efficiency through the development of desirable health habits, knowledge and attitudes. Credit 1(0-2).

215a,b,c. Individual Physical Education Activities

(Fall, Winter, Spring.) Special activities designed for those women whose examinations show that they are unable to participate in regular physical education classes. Credit 1(0-2) each quarter.

Sophomore

220a. Hockey. Fall. Credit 1(0-2).

220b. Stunts and Tumbling. Winter. Credit 1(0-2).

220c. Tennis and Archery. Spring. Credit 1(0-2).

216a,b,c.

A continuation of the course 215a, b, and c. (Fall, Winter, Spring). Credit 1(0-2) each quarter.

Electives

211t. Tap Dancing. Credit 1(0-2).

212f. Folk Dancing. Credit 1(0-2).

217a. The Modern Dance. (For Beginners.) (Credit 1(0-2).

217b. The Modern Dance. (For Intermediate.) Credit 1(0-2.)

317c. The Modern Dance. (For Advanced Students.) Credit 1(0-2).

219. Aquatics. Credit 1(0-2).

COURSES FOR MEN**Freshman**

210a. Speedball. Fall. Credit 1(0-2).

210b. Stunts and Tumbling. Winter. Credit 1(0-2).

210c. Volleyball, Track and Field. Spring. Credit 1(0-2).

213. Personal Hygiene. (Required of all Freshmen.) Credit 1(1-0).

215a,b,c. Individual Physical Education Activities

(Fall, Winter, Spring.) Special activities designed for those men in whose examinations show that they are unable to participate in the regular physical education classes. Credit 1(0-2).

Sophomores

- 220a. Touch Football. Fall. Credit 1(0-2).
 220b. Basketball and Advanced Tumbling. Winter. Credit 1(0-2).
 220c. Softball and Badminton. Spring. Credit 1(0-2).
 216a,b,c. A continuation of the course 215a,b,c. (Fall, Winter Spring).
 Credit 1(0-2).

Electives

- 213t. Tennis and Archery. Credit 1(0-2).
 219. Aquatics. Credit 1(0-2).
 226a. Boxing. Credit 1(0-2).

REQUIREMENTS FOR MINOR IN PHYSICAL EDUCATION**Theory Courses**

Principles of Physical Education, 231	3 hours
The Teaching of Physical Education, 243	5 hours
The Teaching of Health Education, 244	3 hours
Administration of Health and Physical Education, 249	5 hours

Activity and Coaching Courses

213is Individual Sports	1 hour
214 Rhythmics	1 hour
217 The Modern Dance (Women)	1 hour
218 Basketball, Stunts and Tumbling	1 hour
219a Swimming, Baseball, Track and Field	1 hour
225 Coaching of Football (Men)	2 hours
225a Coaching of Softball and Volleyball (Women)	2 hours
225b Coaching of Basketball	2 hours
225d Coaching of Track (Men)	2 hours
225e Coaching of Baseball (Men)	2 hours
226 Group Games, Volleyball and Football or Soccer	1 hour
229a Combatives, Running Activities and Class Formation (Men)	1 hour

Unless indicated otherwise, all courses will be taken by men and women.

MAJOR CURRICULUM IN PHYSICAL EDUCATION

The professional curriculum in physical education is designed to prepare students to become teachers of health and physical education, and athletic coaches. The physical education teacher is generally expected to teach other courses. It is, therefore, recommended that the student, upon counsel of his advisor, pursue courses leading to a second major or double minor.

MAJOR IN PHYSICAL EDUCATION

Freshman Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
English 211, 212, 213	5 (5-0)	5 (5-0)	5 (5-0)
Math. 311, 312	5 (5-0)	5 (5-0)	-----
History 211 or 212	-----	-----	5 (5-0)
Vocations	3 (0-6)	3 (0-6)	3 (0-6)
Art 314, 315, 316	2 (2-0)	2 (2-0)	2 (2-0)
or			
Music 211, 212, 213	1 (0-2)	1 (0-2)	1 (0-2)
Education 211	1 (0-2)	-----	-----
Military Science 211, 212, 213	2 (3-2)	2 (3-2)	2 (3-2)
Physical Edu. 210a, 210b, 210c	1 (0-2)	1 (0-2)	1 (0-2)
Physical Education 213	1 (1-0)	-----	-----

Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
P. Ed. 217 (women)	1 (0-5)	-----	-----
English 220, 221, or 223	-----	-----	5 (5-0)
Chemistry 111, 112	5 (3-4)	5 (3-4)	-----
Botany 111	5 (3-4)	5 (3-4)	5 (3-4)
Zoology, 111	-----	5 (3-4)	5 (3-4)
History 213, 221 or 222	5 (5-0)	-----	5 (5-0)
Physical Edu. 226	1 (0-5)	-----	-----
Ed. 221 Gen. Psych.	-----	-----	5 (5-0)
Physical Edu. 218	-----	1 (0-5)	-----
Physical Edu. 219a	-----	-----	1 (0-5)
P. Ed: 234	-----	5 (5-0)	-----
Military Science 221, 222, 223	2 (3-2)	2 (3-2)	2 (3-2)

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
245 Hist. and Principles of Phy. Ed.	5 (5-0)	-----	-----
225 Coaching of Football (Men)	2 (2-1)	-----	-----
225 ss Coaching of Speedball and Soccer (Women)	2 (2-1)	-----	-----
231 Educational Psychology	-----	3 (3-0)	-----
231 Sociology (Principles)	5 (5-0)	-----	-----
234 Personal and Community Hygiene	5 (5-0)	-----	-----
217 Physical Education (Women)	1 (0-5)	-----	-----
229a Physical Education (Men)	1 (0-5)	-----	-----
221 Human Anatomy	-----	5 (3-4)	-----
236 Principles of Health Education	-----	3 (3-0)	-----
225b Coaching of Basketball	-----	2 (2-1)	-----
Ed. 222 Intro. to Ed.	3 (3-0)	-----	-----

Ed. 223 Adolescent Psy.	3 (3-0)	.....
Ed. 224 Philosophy	3 (3-0)	.....
Ed. 236 Measurements	3 (3-0)	.....
Ed. 237 Principles	3 (3-0)	.....
H. Ec. 123, Nutrition	4 (2-2)	.....
214 Physical Education	1 (0-5)	.....
241 Physiology	5 (5-0)	.....
225e Coaching of Baseball (Men)	2 (2-1)	.....
253 Professional Sports	3 (3-0)	.....
213is Physical Education	1 (0-5)	.....

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
225d Track and Baseball	3 (2-2)	.....	.....
225e Dances	2 (1-2)	.....	.....
249 Administration of Health and Physical Education ....	.....	.....	5 (5-0)
232 Community Recreation	3 (3-0)	.....	.....
231 Economics	5 (5-0)	.....	.....
243 Teaching of P. Ed.	5 (5-0)	.....	.....
223 Individual Physical Education	3 (3-0)	.....	.....
246 Research	3 (3-0)	.....	.....
244 The Teaching of Health	3 (3-0)	.....	.....
238 First Aid	2 (2-0)	.....	.....
225d Coaching of Track (Men) ....	.....	.....	2 (2-1)
225a Coaching of Softball and Volleyball (Women) ....	.....	.....	2 (2-1)
229a Physical Education (Men)	1 (0-5)	.....	.....
251 Practice Teaching ....	.....	.....	5 (1-8)

COURSES FOR MAJOR AND MINOR STUDENTS

The activity courses listed below are designed for major and minor students. Instruction is given in methods of teaching activities in elementary and secondary schools, and the correlation of physical education activities with other school subjects. Special attention is given to the organization of demonstrations, pageants, and playground activities.

212f. Folk Dancing

Characteristic dances of many countries, including Sweden, Hungary, Austria, Spain, France, Holland, the United States and others. Credit 1 (0-2).

213is. Individual Sports

(Men and women). Technical study is made of such activities as shuffleboard, handball, ping-pong, badminton, croquet, archery, and tennis. Credit 1 (0-5).

214. Rhythmics

(Men and women). Activities included are clog, tap and folk dancing. Credit 1(0-5).

See above.

217a. The Modern Dance

For beginners (women). Credit 1(0-2).

217b. The Modern Dance

For intermediates (women). Credit 1(0-2).

217c. The Modern Dance

For advanced students (women). Credit 1(0-2).

217. The Modern Dance

(Women). A concentrated course in the Modern Dance which is required of all women physical education major and minor students. Credit 1(0-5).

218. Basketball, Stunts and Tumbling

(Men and Women). Two different sections. This course is designed to familiarize the student with the techniques of basketball, stunts and tumbling. Credit 1(0-5).

See above.

219a. Swimming, Baseball, Track and Field

(Men and Women). Two different sections. This course is designed to give the student a playing knowledge of basketball, track and field, and to learn the fundamentals of swimming well enough to be able to pass the American National Red Cross test for the beginners or the standard certificates. Credit 1(0-5).

221. Human Anatomy

(Men and Women). A brief study is made of the human body as it relates to students of physical education. Credit 5(3-4).

223. Individual Physical Education

(Men and Women). A study is made of methods of examining and determining needs of the handicapped; activities suitable for individuals with abnormal body conditions, and the conduct of a program of restricted activities to meet their needs. Prerequisite: Human anatomy. Credit 3(3-0).

225. The Coaching of Football

(Men). A study is made of the history of the sport, of rules, skills, psychology of coaching, of handling players, methods of organizing practices, strategy, team offenses and defenses, and of various modern formations and systems of play. Credit 2(1-2).

225a. The Coaching of Softball and Volleyball

(Women). Credit 2(1-2).

225b. The Coaching of Basketball

(Men and women). Two different sections offered. Credit 2(1-2).

225c. Tennis

(Men and women). Credit 1(0-2).

225d. The Coaching of Track and Baseball

(Men). A study is made of the history and development of each sport, the skills, individual and team offenses, and defenses, strategy and the psychology of coaching. Credit 3(2-2).

225e. The Teaching of Social, Tap, and Square Dancing

(Women.) Consideration is given to the methods of teaching social, tap, and square dancing. Credit 2(2-2).

225ss. The Coaching of Speedball and Soccer

(Women). Credit 2(2-1).

226. Group Games

(Men and women). A study is made of a large variety of games of low organization of the circle, group, and line type, which might be suitable for use on the playground, in the gymnasium, or at camp, and for adult clubs or gatherings. A concentrated study is also made of the techniques of volleyball and football for men, and volleyball and soccer for women. Credit 1(0-5).

226a. Boxing

(Men). Credit 1(0-2).

227. Practice and Procedures in Physical Education

(Men and women). Winter. Credit 3(2-2).

228. Practice and Procedures in Health Education

(Men and women). Spring. Credit 3(2-2).

229a. Combatives, Running Activities, and Class Formations

(Men). Required of all physical education major and minor students. Credit 1(0-5).

231. Principles of Physical Education

(Men and women). A critical study of the scientific basis for physical education with applications of the aims and objectives to the modern concepts of education. Prerequisites: Ten hours of biological studies and junior standing. Credit 3(3-0).

232. Community Recreation

(Men and women). A study is made of city, state and national organizations. Practice is given in the general principles and techniques in the organization and promotion of leisure activities for home, school and community. Credit 3(3-0).

232a. Nature and Function of Play

(Men and women). A brief study of the history and theories of play, and play as a function of enriched living. Credit 2(2-0).

234. Personal and Community Hygiene

(Men and women). This course aims to establish within the individual a basis for positive health and effective living through a consideration of those factors which effect his personal and health efficiency. Consideration is also given to the field of public health as it affects the community, with special emphasis being placed on ways in which the individual and community agencies may improve and maintain group health. Credit 5(5-0).

236. Principles of Health Education

(Men and women). A study is made of principles for the teaching of health education in elementary and high schools. A close correlation with physical education and other subjects is outlined and encouraged. Prerequisite: Personal and Community Hygiene. Credit 3(3-0).

338. First Aid

(Men and women). A study of techniques of first aid to the injured in the home, school, and community. Emphasis is placed upon the practice of safety measures. The standard certificate of the American National Red Cross is issued upon successful completion of the course. Credit 2(1-2).

241. Physiology

(Men and women). A course in elementary physiology, covering the muscular, cardiorespiratory, nervous, gastro-intestinal and reproductive systems. Credit 5(5-0).

243. The Teaching of Physical Education

(Men and women). Two different sections. This course points out the best procedures in acquiring desired outcomes in physical education. Practice is given to planning, organizing and supervising physical education class activities. Prerequisites: Principles of physical education and an adequate number of other physical education courses. Credit 5(3-4).

244. The Teaching of Health Education

(Men and women). In this course consideration is given to the methods, materials and procedures for the teaching of health in the elementary and high schools. Prerequisites: Principles of Health Education and Personal Hygiene. Credit 3(3-0).

245. History and Principles of Physical Education

(Men and women). A study of the evolution of physical education from the earliest time down to the present day. Consideration is given to the relationship of physical education to education and to national life and ideals through the different historical periods. A critical analysis is made of the scientific basis for physical education with applications of the aims and objectives to the modern concepts of education. Prerequisites: Ten hours of biological studies and junior standing. Credit 5(5-0).

249. Administration of Health and Physical Education

(Men and women). A study of philosophy and policies in the administration of a health and physical education program, including the classification of students, the staff, teaching load, time schedule, finance, the gymnasium, lockerrooms, equipment, and inter-scholastic athletics. Prerequisites: Principles, and an adequate number of other physical education courses. Spring. Credit 5(5-0).

252. Athletic Officiating

(Men and women). Two different sections. Credit 1(0-2).

253. Professional Sports Problems

(Men and women). An investigation is made into the conduct of intramural and interscholastic sports activities with consideration being given to the problems of men coaches for girls teams, awards, tournaments, public relations, health problems of the athlete, and athletic insurance. Prerequisite: Senior standing. Credit 3(3-0).

254. Field Service

(Open to students wishing to major in Physical Education.) A course designed to provide opportunities for students to render service to children of various ages through the many community and school resources. Experience is gained by the student through a study of the growth, development and learning processes of the child through supervised activities. Prerequisite: Sophomore standing. Credit 2(1-4).

DEPARTMENT OF PHYSICS

The work of the Department of Physics is directed toward the following ends: (1) the training of students of the Sciences for future graduate work; (2) the training of teachers of Physics and the Physical Sciences for Secondary Schools; (3) the training of pre-engineering and pre-medical students for later professional work; and (4) the training of the general student in scientific methods of work and in the understanding of the place of physical science in the modern world. Students

who are interested in these opportunities should begin the study of physics as early as possible. Three courses in the Calculus should be taken in the Sophomore year to provide a good background for major work in the physical sciences and engineering.

MAJOR IN PHYSICS

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Physics 331, Electricity and Magnetism . . .	-----	-----	5 (5-0)
M. E. 331, 332	5 (5-0)	5 (5-0)	-----
Physics 332	-----	5 (5-0)	-----
Physics 351, 352 Physical Mathematics . . .	5 (5-0)	5 (5-0)	-----
Math. 331. Differential Equations	-----	-----	5 (5-0)
Electives	8 ()	3 ()	8 ()
	<hr/>	<hr/>	<hr/>
	18 hrs.	18 hrs.	18 hrs.

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Physics 334, 335. Electrical Measurements.			
Same as E. E. 334, 335	-----	5 (3-4)	-----
Physics 333 Electronics	-----	5 (3-4)	-----
Physics 505 Modern Physics	-----	-----	5 (5-0)
Physics 506 Vector Analysis	5 (5-0)	-----	-----
Physics 507, 508 Electrodynamics	-----	5 (5-0)	5 (5-0)
Electives	13 ()	3 ()	8 ()
	<hr/>	<hr/>	<hr/>
	18 hrs.	18 hrs.	18 hrs.

ENGINEERING PHYSICS

Freshman Year

(See First Year's Curricula of Mechanic Arts, Page 60.)

Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Mathematics 321, 322, 323	5 (5-0)	5 (5-0)	5 (5-0)
Physics 321, 322, 323	5 (3-4)	5 (3-4)	5 (3-4)
Social Sciences	5 (5-0)	5 (5-0)	3 (3-0)
Machine Shop Practice 328, 329	2 (0-4)	2 (0-4)	-----
Mechanism M. E. 321	-----	-----	4 (3-2)
Military Science 221, 222, 223	2 (2-2)	2 (2-2)	2 (2-2)
	<hr/>	<hr/>	<hr/>
	19 hrs.	19 hrs.	19 hrs.

Junior Year

Mathematics 331, 501 .....	.....	5 (5-0)	5 (5-0)
Physics 334, 335, 351	3 (1-4)	3 (1-4)	5 (5-0)
Chemistry 141, 142	6 (3-6)	6 (3-6)	.....
Physics 331 .....	.....	.....	5 (5-0)
Physics 505 .....	.....	.....	5 (5-0)
Electives	10 ()	5 ( )	.....
	<hr/>	<hr/>	<hr/>
	19 hrs.	19 hrs.	20 hrs.

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Physics 336, 332, 333	5 (5-0)	5 (5-0)	5 (5-0)
Physics 352	5 (5-0)	.....	.....
Electives	8 ()	13 ()	13 ()
	<hr/>	<hr/>	<hr/>
	18 hrs.	18 hrs.	18 hrs.

Suggested Electives

Economics 231, 232	Math. 318
Pol. Sc. 231	M. E. 331, 332
History 213, 221	Physics 353, 507, 508
Education 231	

COURSES IN PHYSICS**311. Principles of Physics**

A study of the fundamental laws governing bodies at rest and in motion. Molecular properties of Matter, Heat and Temperature measurements. For Non-Technical majors only. Prerequisites: Math. 312. Credit 5(4-2).

312. Principles of Physics

Electricity and Magnetism. Electromagnetic Phenomena. Circuit theory as applied to Direct and Alternating Currents. Conduction of electricity through liquids and gases. Prerequisite: Physics 311. Non-Technical Majors only. Credit 5(4-2).

313. Principles of Physics

Wave Motion, Sound and Light. Special emphasis on velocities of sound, Doppler's Principle resonance conditions and musical instruments. Geometrical and Physical optics, also selected topics in Modern Physics. For non-technical majors only. Prerequisite: Physics 312. Credit 5(4-2).

314. Household Physics

Special emphasis is given to the applications of mechanics, heat, and electrical principles to the modern household. For majors in Home Economics only. Credit 5(4-2).

321. General Physics

Introduction to the fundamental principles of mechanics (statics and kinetics), and heat. Molecular structure, heat and its transformation, and thermometry and heat measurements. Liberal use of mathematics including beginning calculus. Math. 321 should be taken concurrently. Prerequisite: Math. 311, 312, 313. Credit 5(3-4).

322. General Physics

Introduction to the fundamental principles of wave motion: Emphasis on velocity of sound in air and other media; its propagation, and acoustics. Extensive study into the geometrical and physical properties of light with selected topics in Modern Physics dealing with other forms of radiation. Prerequisite: Physics 321. Credit 5(3-4).

323. General Physics

Introduction to the basic principles of electricity and magnetism. Conduction of electricity through liquids and gases. Circuit theory and measurements. Selected topics in electronics and radioactivity. Prerequisite: Physics 322. Credit 5(3-4).

331. Electricity and Magnetism

A presentation of the theory of direct current and alternating current electricity, including topics in magnetism and electricity. Prerequisite: Physics 323. Credit 5(5-0).

332. Thermodynamics

The first, second, and third laws of thermodynamics; Carnot cycle and heat engines; thermodynamic properties of gases, liquids, and solids. Prerequisites: Physics 323, Math. 331 concurrently. Credit 5(5-0).

333. Electron Physics

A study of cathode rays, charge and mass of the electron, photoelectricity, radioactivity, thermionic emission, radiation and ionization potentials. Prerequisite: Physics 331. Credit 5(5-0).

334. Electrical Measurements

Same as E. E. 334. Prerequisite: Physics 323. Credit 3(1-4).

335. Electrical Measurements

Same as E. E. 335. Prerequisite: Physics 334. Credit 4(2-4).

336. Electrical Measurements

Same as E. E. 336.

337. Vibration and Sound

Production, propagation, transmission and reception of sound. Applications to acoustics, mechanics, and electrical problems. Prerequisites: Physics 323, Math. 332. Credit 5(4-2).

351. Physical Mathematics

Probability, statistics, graphical methods, least squares, empirical equations. Prerequisite: Math. 322. Credit 5(5-0).

352. Physical Mathematics

Complex numbers, series, functions of a complex variable, applications to wave motion. Prerequisites: Math. 322, Physics 323. Credit 5(5-0).

353. Theoretical Mechanics

Dynamics of particles and of rigid bodies. Prerequisites: Physics 321, Math. 322. Credit 5(5-0).

Graduates and Advanced Undergraduates**501. Meteorology**

A study of weather maps and polar front analysis is included together with a discussion of the principles underlying weather forecasting causes of weather changes. Credit 5(5-0).

502. Heat

Methods of temperature measurements, specific heats, thermal expansion in solids, in liquids and in gases, conduction, radiation, kinetic theory of gases, change of state, low and high temperature measurements. Prerequisite: Physics 323. Credit 5(2-6).

503. Physical and Geometric Optics

A study of the physical properties of light, velocity, wave properties color, optical instruments. Prerequisite: Physics 323. Credit 5(2-6).

505. Modern Physics

A course dealing with the significant advances of physics since 1900. Includes atomic structure, elementary quantum theory. Prerequisite: Physics 333. Credit 5(5-0).

506. Vector Analysis

Same as Math. 501. Prerequisite: Math. 323. Credit 5(5-0).

507. Electrodynamics

Mathematical theory of electromagnetic fields. Prerequisites: Differential Equations, Physics 331, Math. 323. Credit 5(5-0).

508. Electrodynamics

Maxwell's equations, general theorems of electrodynamics, electromagnetic waves. Prerequisites: Physics 507, Math. 323. Credit 5(5-0).

555. History of Physics

Historical development of the scientific method. The social and political implications of science and technology. Open to advanced students of all departments. Credit 5(5-0).

DEPARTMENT OF PLANT INDUSTRY

The Department of Plant Industry offers courses in agricultural engineering, field crops, fruits and vegetable production, geology, and soils.

Curricula leading to the degree of Bachelor of Science are offered in (1) Agricultural Engineering, (2) Agronomy, (3) Horticulture, and (4) Ornamental Horticulture.

These curricula are designed to provide scientific and technical experiences needed in general farming, extension work, teaching in agricultural high schools and colleges, specialized areas of crop production, business enterprises; and a sound background for graduate work.

Students who wish to elect majors under Plant Industry should follow the Basic Curriculum in Agriculture for the freshman and sophomore years (see page 55). Major programs for the junior and senior year may be worked out in conference with the Head of the Department.

AGRICULTURAL ENGINEERING

111. Agricultural Drawing

Lettering, use of instruments, multi-view projection drawing, auxiliary projection, sectional views and dimensioning. Credit 3(0-6).

122. Farm Shop

Proper use of tools, woodwork, bench and vise work, pipe fitting and concrete work. Credit 3(1-4).

123. Field Machinery

Principles, operation, adjustment, and maintenance of farm field machinery. Credit 3(1-4).

124. Farm Buildings

Fundamentals of building construction applied to location, selection of materials, foundations and planning. Prerequisite: Ag. Eng. 111. Credit 3(0-6).

131. Surveying and Drainage

Principles of surveying and drainage, planning of soil erosion and drainage systems, based on topographical and soil requirements. Prerequisite: Soils 123, and Math. 311, 312. Credit 3(1-4).

132. Farm Power

Principles of mechanical power, use, care and adjustment of internal combustion engines and electric motors. Prerequisite: Phy. 311. Credit 3(1-4).

141. Rural Electrification

A study of electricity, electrical wiring, and electrical devices, including motors, with particular emphasis upon the relation of these to the home and the farm. Prerequisite: Physics 311, 312. Credit 3(1-4).

142. Water Supply and Sanitation for the Farm and Home

The planning and installation of farm water and sanitation systems. Prerequisite: Ag. Eng. 122, Bact. 123. Credit 3(2-2).

Advanced Undergraduates and Graduates**500. Terracing and Drainage**

Improvement of soil by use of engineering structures, practice in construction of terraces and drainage systems. Prerequisite: Ag. Eng. 131. Credit 5(3-4).

501. Farm Shop Organization and Management

A course designed for prospective and in-service teachers of vocational agriculture. Includes presentation of purpose, plans, and equipment of shops, organization of course of study, and methods of teaching. Prerequisite: Ag. Eng. 122, Ag. Ed. 143. Credit 3(3-0).

502. Advanced Farm Shop

Care, operation, and maintenance of farm shop power equipment. Prerequisite Ag. Eng. 122. Credit 3(0-6).

503. Special Problems in Agricultural Engineering

Special work in agricultural engineering on problems of special interest to the student. Credit (1-5 hours). Arranged.

FIELD CROPS (Agronomy)**111. General Farm Crops**

History, classification, distribution, culture and utilization of the important field crops. Identification of crops, crop seed, and farm weed seeds. Credit 3(2-2).

121. Principles of Crop Production

Factors affecting crop yields with emphasis on choice of crops and varieties, soil fertility and fertilizers, tillage and harvesting methods and crop rotation. Credit 3(2-2).

124. Forage Crops

Grasses, legumes and other plants and their uses as hay, pasture, silage and special purpose forage; identification of plants and seed and study of quality in hay, silage and pasture population. Credit 3(2-2).

131. Hay and Pasture Crops

Major problems connected with meadow and pasture establishment and management. Credit 3(2-2).

Advanced Undergraduates and Graduates**501. Crop Ecology**

The physical environment and its influence on crops; geographical distribution of crops. Credit 3(3-0).

502. Breeding of Crop Plants

Significance of crop improvement in the maintenance of crop yields; application of genetic principles to techniques used in improvement of crops; the place of seed certification in the maintenance of varietal purity and production of quality seed. Credit 3(2-2).

503. Special Problems in Agronomy

Designed for students who desire to work out special problems in crop production. Credit 2 to 6 hours.

FRUITS AND VEGETABLE PRODUCTION (Horticulture)**111. General Vegetable Production**

Emphasis on the principles of vegetable production, construction and management of hotbeds and cold frames, sowing and planting, cropping systems and cultural methods. Credit 3(2-2).

122. General Fruit Production

Planting, propagating and caring for orchards as they are applied to North Carolina conditions. Credit 3(2-2).

133. Advanced Vegetable Production

Commercial vegetable production with special emphasis on large scale production, harvesting and marketing of vegetables. Credit 4(2-4).

134. Small Fruits

The culture of strawberries, grapes, raspberries, blackberries and other small fruit. Field trips, mostly within the state. Credit 3(2-2).

135. Spraying

Emphasis is placed on the preparation and use of the latest spray machines, equipment and materials in controlling insects and diseases of the orchard and garden. Credit 3(1-4).

142. Plant Propagation and Nursery Practice

Methods used in the commercial propagation of fruits and ornamental shrubs with emphasis on grafting, budding and cutting. Nursery culture methods and practices. Credit 3(1-4).

141. Harvesting and Marketing of Fruits and Vegetables

Problems involving time of harvesting, packaging, packing and marketing of fruits and vegetables. Credit 4(2-4).

Advanced Undergraduates and Graduates**501. Special Problems in Fruits and Vegetables**

Work along special lines given largely by the project method for advanced undergraduate students who have the necessary preparation. Credit 2 to 5 hours.

GEOLOGY**111. Physical Geology**

Relation of geologic principles in the development of a balanced concept of the earth and earth history; identification of rocks and minerals; weathering, water and mineral resources; sediments, metamorphosis and volcanism; land forms. Credit 4(3-2).

ORNAMENTAL HORTICULTURE**112. Amateur Floriculture**

General principles of growing flowers on a small scale in the greenhouse and outside. The potting of plants and planning the small border flower bed. Credit 3(2-2).

131. Major Floricultural Crops

Cultural methods, watering, ventilation and propagation of major greenhouse crops. Credit 3(2-2).

132. Minor Floricultural Crops

Production of minor crops, conservatory plants and bedding plants. Credit 3(2-2).

133. Elementary Landscape Gardening

Principles of landscape gardening as applied to school and home grounds; the use of common plant materials; practice in simple design and drawing. Credit 3(2-2).

134. Plant Materials

The merits, adaptability and identification of ornamental trees and shrubs used in landscape planting. Credit 4(2-4).

141. Advanced Landscape Gardening

A continuation of elementary landscape gardening with emphasis on large scale problems. Credit 3(2-2).

142. Floral Arrangement

Essentials of flower arrangement with emphasis on their use in homes, schools, churches and special occasion. Credit 3(1-4).

143. Advanced Floral Design

Weddings and special party arrangements, casket covers, large wreaths and other special floral designs. Credit 3(1-4).

144. Greenhouse Construction and Management

Types of greenhouses and their structural details with regard to watering, heating and ventilation. Credit 3(2-2).

Advanced Undergraduates and Graduates**501. Special Problems**

Work along special lines given largely by the project method for advanced students who have the necessary preparation. Credit 2 to 5 hours.

SOILS (Agronomy)**123. Soils**

The general nature and properties of soils with introductory treatment of soils genesis, morphology and classification. Credit 4(2-4).

132. Soil Fertility

General principles of soil fertility; the physical, chemical and biological factors affecting soil fertility and crop production. Credit 3(3-0).

134. Soils and Fertilizers

Analytical and theoretical analysis of soils and fertilizers. Application of physics, chemistry and microbiology to the study of soil-plant interrelationships. Credit 4(2-4).

140. Soil and Water Conservation

Social and economic aspects of soil deterioration and water conservation. Principles of land improvement as applied especially to humid regions. Credit 3(3-0).

142. Soil Genesis and Classification

Soil genesis, morphology and classification of the major soil groups of the United States in relation to soil management. Study of soil maps and soil survey reports. Credit 3(2-2).

Graduates and Advanced Undergraduates**504. Special Problems in Soils**

Research problems in soils for advanced students majoring in agronomy. Credit 2 to 8 hours.

RELIGION AND ETHICS

It is the aim of these courses to enable students to believe wisely and to act well through an understanding of their religious and moral heritages.

231. Introduction to Old Testament

A survey of the history and literature of the Old Testament with special emphasis upon the growth of the idea of God and its effect upon social and political life. Fall. Credit 3(3-0).

232. Introduction to New Testament

History and literature of the New Testament. Emphasis is upon the teachings of Jesus and the history of the early church. Winter. Credit 3(3-0).

233. Ethics

An introductory course in the study of moral origins, interpretation of standards of value in private, business and public life. The nature and scope of Christian ethics will be emphasized. Spring. Credit 3(3-0).

241. Introduction to Philosophy

An introductory course covering such topics as theories of reality, the nature of mind and of knowledge, philosophy and religion, and the higher values of life. Fall. Credit 3(3-0).

242. Philosophy of Religion

An examination of religion in its relations to the whole life of man. Emphasis upon religious values, conceptions of God, ways of knowing God, problem of belief in God, good and evil, prayer, sin and suffering, and immortality. Winter. Credit 3(3-0).

243. The Church in Contemporary Society

A brief survey of the historical development of the Christian church with emphasis upon the role of the church in contemporary affairs. Spring. Credit 3(3-0).

RESEARCH

246. Senior Research

An introduction to methods of gathering, recording, and interpreting information. Open only to seniors in the School of Education and Sciences. Each student will either complete a long scholarly paper, which in certain cases will constitute a thesis, or contribute to the completion of a project requiring the work of two or more students. Given each quarter. Credit 3(3-0).

For graduate research in specific fields, Graduate Thesis, page 70.

DEPARTMENT OF SOCIAL SCIENCE

In keeping with the general objectives of the College, the offerings of this department are designed to provide students with a cultural and humanistic preparation in the social sciences; to insure students a proper groundwork on which to build advanced technical and professional courses, and to stimulate those qualities and characteristics from which come intellectual vigor, broad human sympathy and constructive imagination.

THE SOCIAL SCIENCES

The social sciences at the Agricultural and Technical College of North Carolina include economics, geography, history, political science, and sociology.

A MAJOR IN THE SOCIAL SCIENCES

Students who wish to major in the social sciences or a particular social science, may do so by selecting any one of two curricula: (1) Social Studies, or (2) Applied Sociology.

The *Social Studies* curriculum is specifically designed to prepare students for the teaching of history and/or any combination of the social sciences listed above, in junior and senior high schools.

The *Applied Sociology* curriculum is geared to meet the needs of students who are interested in social welfare, labor relations, government service, personnel administration, industrial relations, public relations and kindred vocations.

COMPREHENSIVE EXAMINATION

A social science major must pass a comprehensive examination in the social sciences before he will be recommended for graduation by the department.

Examinations are designed to demonstrate a student's ability to correlate the subject matter of the social sciences and to apply it in practical situations.

The examination is given once each school quarter by the Department of Social Science.

Sample programs for social science majors are shown below.

MAJOR IN SOCIAL STUDIES

This major is designed especially for persons planning to teach in the secondary schools.

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Hist. 231, 232 Ancient and Medieval History .....	.....	5 (5-0)	5 (5-0)
Ec. 231, 232 Economics	5 (5-0)	5 (5-0)	.....
Ec. 233 Money and Banking or			
Ec. 234 Labor Problems .....	.....	.....	5 (5-0)
231, 232, 242 Sociology	5 (5-0)	5 (5-0)	3 (3-0)
Minor or Electives	8 ()	3 (3-0)	5 (5-0)

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Geo. 240 Principles of Geography .....	.....	5 (5-0)	.....
Geo. 241 Commercial Geography .....	.....	.....	5 (5-0)
Hist. 233 Latin American History .....	.....	.....	3 (3-0)
Pol. Sc. 231 Federal Government	5 (5-0)	.....	.....
Pol. Sc. 232 State Government .....	.....	5 (5-0)	.....
Minor or Electives	10 ()	5 ()	5 ()

MAJOR IN APPLIED SOCIOLOGY**Junior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Ec. 231, 232, 234	5 (5-0)	5 (5-0)	5 (5-0)
Soc. 231, 232, 233	5 (5-0)	5 (5-0)	5 (5-0)
Soc. 501, 502, 235	3 (3-0)	3 (3-0)	3 (3-0)
Pol. Sc. 231 or 232	5 (5-0)	.....	.....

Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Pol. Sc. 231 or 232	5 (5-0)	.....	.....
Soc. 241, 242 .....	.....	3 (3-0)	3 (3-0)
Ec. 254, 501, 502	4 (2-4)	3 (3-0)	3 (3-0)
Ec. 235, 236, 245	3 (3-0)	3 (3-0)	2 (2-0)
Electives	5 ()	10 ()	10 ()

COURSES IN HISTORY**210. History of Civilization**

A general course surveying the main trends in the history of western civilization and showing the development of ancient civilization and the subsequent expansion of medieval and modern Europe. Credit 5(5-0).

211. Modern Europe

A survey course dealing with major factors and movements in the history of modern Europe. It deals with economic, social, political, re-

ligious, and intellectual problems in their relationship to the development of national states, growth of democracy and the expansion of Europe from 1500 to 1815. Lectures, collateral reading, special reports and map work. Fall and Spring. Credit 5(5-0) each.

212. Modern Europe

A survey of the history and development of Europe from 1815 to the present. Credit 5(5-0).

213. History of the Negro

This course begins with a brief survey of the African background of the Negro and traces him from Africa to America. It includes a study of his enslavement, with special emphasis on slavery in America, the Free Negro before 1860, abolition, and the Civil War with special emphasis on the part played by Negro troops, achievements since 1865, and forces in Negro progress. Winter or Spring. Credit 5(5-0).

221. American History

The economic, political and social development of the colonies and the United States up to the Civil War. Attention is given to the early American settlers, (Indians). Credit 5(5-0).

222. United States History

An intensive study of the political, social and economic history of the United States from the reconstruction period to World War I. Credit 5(5-0).

223. History of Reconstruction

An intensive study of the social, political and economic conditions of the United States during the years 1865 to 1895. Prerequisite: 15 hours of history. Winter. Credit 3(3-0).

226. History of England

A survey of the social and political development of England in the 16th, 17th, and 18th centuries. Credit 5(5-0).

231. Ancient History

This course is designed for those majoring in the field or who plan to teach history in secondary schools. It includes a study of the civilization and contributions of the people of the Orient, along the Nile, and of Greece and Rome. Prerequisite: 15 hours of history. Fall. Credit 5(5-0).

232. Mediaeval History

A history of Europe in the middle ages with particular attention to social and economic conditions and cultural and religious development. Prerequisite: 15 hours of history. Winter. Credit 5(5-0).

233. History of Latin America

A study of the rise and development of the Latin-American nations, with special attention to their relations with each other and with the outside world. Prerequisite: 15 hours of history or consent of instructor. Spring. Credit 3(3-0).

234. Contemporary American History

Analysis of important problems in American history since World War I, with emphasis on the domestic and foreign policies. Any quarter. Credit 3(3-0).

235. History of Eastern Europe

A general course in the history of Eastern Europe, the Balkans and Russia from the period of the Romanoffs to the present. Credit 3(3-0). Not offered 1950-51.

237. American Constitutional History

A study of the constitutional development of the United States from 1789 to the present time. Major supreme Court decisions affecting constitutional changes will be given special attention. Credit 3(3-0).

238. History of North Carolina

A general survey of North Carolina from colonial times to the present. Credit 3(3-0).

246. History of the Far East

A survey of the economic and political development of far eastern countries with emphasis on the twentieth century. Prerequisite 15 hours of history. Credit 3(3-0).

POLITICAL SCIENCE

231. Federal Government

A general introductory course in the government of the United States designed to acquaint the student with the more important facts of the organization and working of Federal institutions and to give a foundation for more advanced work in government. Discussed are principles of political science, the state, the nation, the government, constitution, the federal executive, cabinet, and courts. Prerequisite: 15 hours of Soc. Science or consent of instructor. Fall. Credit 5(5-0).

***232. State and Local Government**

A study of state constitutions and of the structure and functions of state and local government in the United States. Prerequisite: 15 hours of Social Science or consent of instructor. Winter. Credit 5(5-0).

*Offered in alternate years. Not offered in 1951-1952.

233. Introduction to American Government

This course is designed to acquaint the student with the organization and administration of federal, state and local government. It is intended especially for non-Social Science majors interested in understanding how government operates. Fall or Winter. Credit 3(3-0).

GEOGRAPHY**240. Principles of Geography**

This course is a survey of the principles of geography. The earth, air, sea, and land are studied with particular emphasis upon the physiographic features of North America. Credit 5(5-0).

241. Economic Geography

This course deals with natural environment and natural resources in relation to the various economic areas of the world with particular emphasis on the development of the United States. This is followed by a regional approach in relation to economic activities. Credit 5(5-0).

242. Resources and Industries of United States

A study of the physical resources of the United States and its possessions with emphasis on the utilization and conservation of power, labor, minerals and soils. Credit 3(3-0).

243. Economic Geography of Latin America

This course deals with the agricultural and industrial resources of Latin America with special emphasis on such countries as Brazil, Argentina, Mexico and Cuba, the utilization of Negro labor, and the assimilation of African culture into Latin-American life. Credit 3(3-0).

244. Political Geography

Theories of political geography. Territorial changes and their political significance. Problems in political unification, centralization and federation. Relations between constituent parts of Empire and Commonwealth. Credit 3(3-0).

SOCIOLOGY**231. Principles of Sociology**

Principles and laws of sociology; the literature in which they are discussed, and the key concepts about which they center. 5(5-0).

232. Social Problems

An analysis of changing aspects of our social life and the problems created for the individual and society. Special emphasis upon sociological problems and social planning. Credit 5(5-0).

233. Rural Community Organization

A study of the demographic factors, family life, standards of living, social attitudes and values, and the trends, with their implications toward urbanization. Prerequisite: Sociology 231 or consent of instructor. Credit 5(5-0).

234. Juvenile Delinquency

A study of criminogenic homes, communities and general conditions conducive to delinquency; the nature of delinquent behavior, viewed according to legal norms and by sociological and administrative standards. Critical analysis of theories and research in the etiology of delinquent behavior. The relationship of cause and treatment is considered. Credit 3(3-0).

235. Criminology

Causative explanations and the nature of crime and criminal behavior; society's reaction toward criminal and anti-social acts; critical analysis of theories and research in the etiology of criminal behavior, and trends in the treatment and disposition of criminals. Credit 3(3-0).

240. Social Psychology

Social application of psychology; social stimulation and response; formation of attitudes involved in cooperation-competition, leadership-submission, frustration-aggression, crowd and mob phenomena. Credit 3(3-0).

241. Marriage and the Family

A study of marriage problems and family living with special attention being given to items such as personality, courtship, family budgeting, divorce, parenthood. Credit 3(3-0).

242. Minority Groups in the United States

An examination of the composition, status, and relations of racial and other minority groups in the United States; trends and policies; analysis of recent research. Credit 3(3-0).

243. Public Relations

A study of public relation techniques; mechanics of publicity, the newspaper, research, surveys and measurement; press and personal relations. Credit 3(3-0).

244. Human Relations in Industry

Analysis of informal and formal social organizations within industry; intergroup conflicts and process of adjustments; management, labor and public policies affecting group relations in industry. Credit 3(3-0).

501. Leadership

Survey and critical analysis of qualities and factors essential for good leaders in American life. Prerequisite: Sociology 232. Credit 3(3-0).

502. Current Economic and Social Problems

A practical course in applied economics and sociology dealing with analysis of present trends in government, economics, industry, agriculture, and the social implications of these trends. Current problems of everyday life are emphasized. Prerequisite: 15 hours of social science. Credit 3(3-0).

503. Research Problems

Individual problems for research in each student's field of interest—labor, industry, agriculture, unemployment, old age, etc. Prerequisite: 15 hours of social science. Credit 3(1-4).

506. Population Problems

Introduction to population study. The development of official population data; principal sources of information; methods of analysis; survey of contemporary population movements.

ECONOMICS**231. Principles of Economics**

This course surveys the general field of Economics. It considers the nature and scope of Economics, basic economic institutions, and economic characteristics of present society. Credit 5(5-0).

232. Economic Problems

This course gives detailed consideration to major areas in modern economic life. The implications of public ownership, monopoly, organized labor and business combinations are stressed as modifications of the ideal competitive economy. Prerequisite: Economics 231 or consent of instructor. Credit 5(5-0).

233. Money and Banking

A general survey of the role of banking in the economy. The relationship of the banking system as a business enterprise to its role as the regulator of business activity; the nature of money and international exchange. Credit 5(5-0).

234. Labor Problems

An introductory course dealing with the efforts of working people to improve their relative position in the economy. The influences of unionism and of governmental participation are emphasized. Particular attention is directed to the collective bargaining process and to labor legislation. Credit 5(5-0).

236. Consumer Economics

This course is designated to show the importance of the consumer in the American economy, especially as a force for economic betterment; necessity for sound budgeting of income and sound spending policies; Consumer problems of Negroes. Credit 3(3-0).

254. Statistical Methods in Social Science

An introduction to research methods; social statistics; analysis of methods used by social scientists. Credit 4(2-4).

245. Seminar in Economics

An intensive study of significant labor and industrial problems and literature. Lectures, student reports and discussions. Open only to majors and minors in the social sciences. Credit 2(2-0).

246. Government and Economic Life

A survey of the rationale and effects of the impact of government in major areas of economic life. Regulation of industry and of labor relations are stressed, with implications of such activities for the traditional economic institutions of America. Prerequisite: Economics 231 or consent of instructor. Credit 3(3-0).

501. Recent Labor Legislation

Problems of labor from the standpoint of the state. A survey of existing legislation and procedures for settling disputes. Minimum wage and other legislation are studied in detail. Credit 3(3-0).

502. Social Security Legislation

The development of social security programs in America. Particular emphasis is placed upon unemployment insurance, old age benefits and other aspects of the existing program. Attention is given to administrative and social problems encountered. Credit 3(3-0).

VOCATIONAL SCHOOL

I. Trades and Industries

A. Auto-Mechanics

C. Carpentry

C.M. Cabinet Making and Upholstering

S.R. Shoe Repairing

T. Tailoring

Sec. Sc. Secretarial Science

M. Masonry

Pl. Plumbing

W. Welding

VOCATIONAL COURSES

AUTO MECHANICS

Training Objectives

This is a carefully organized course designed to prepare those young men and women inclined to be skilled mechanics. The practical side of the course has been so emphasized that upon the completion of the trade students will be qualified to become owners or managers of an auto service business as well as skilled mechanics in this field. A diploma will be awarded to those students satisfactorily completing the course.

Length of Course

Three years of nine months each depending upon the student's experience and ability.

Amount of time required in shop

Twenty hours per week, thirty-six weeks per year.

CURRICULUM

Auto Mech. 411, 412, 413, 421, 422, 423, 431, 432, 433	90 Hrs.
Math. 335, 336, or 311, 312	6 Hrs.
Eng. 211, 212, 213	15 Hrs.
M. Sc.	12 Hrs.
Physical Ed.	6 Hrs.
M. Shop M. E. 328, 329, 330	6 Hrs.
Welding 311, 312, 313	9 Hrs.
B. Adm.	10 Hrs.

Suggested Electives

Ec. 231, 232, 234.

B. A. 332, 333, 337, 339, 346, 351, 335.

COURSES

411. Benchwork

A study will be made and laboratory work given in thread cutting with dies and taps, clipping, filing, drilling, sharpening and use of small tools.

412. Maintenance and Service

Lecture on the principles of operation and maintenance of all chassis parts. Laboratory work will be on the disassembly and reassembly of transmission, rear ends, universal joints, shock absorbers, and braking systems.

NOTE: All large equipment and special tools are furnished by the College but the student is expected to furnish a set of small tools and protective clothing.

413. Power Plant

Lecture, demonstration and laboratory work will be undertaken on the principle of the four-cycle engine, fuel and cooling systems.

421. Power Plant

General shop practice is designed to give a student experience in general overhaul of engine including adjusting of bearings, grinding valves, and installing rings.

422. Power Plant

Instruction will be given on use of the boring bar, connecting rod aligners, use of cylinder hone, reamers, and fitting of pistons.

423. Electrical System

The fundamental principles of the electrical system, including magnetism, generators, starters, voltage and current regulators, automatic chokes, ignition wiring and batteries will be studied.

431. Body Work

Lecture and demonstration on the use and care of body tools, along with laboratory is designed to give a student skill in body work.

432. Painting

This course is designed to give the student experience and knowledge of spraying of various enamels and lacquers.

433. Optional Specialization

During this quarter the student will do special projects in that phase of Automobile Mechanics in which he is especially interested.

MASONRY**Training Objectives**

The objectives of the program is to develop in the student skills and knowledge in masonry that he may successfully use in practical construction.

Length of Course

Three years of nine months each depending upon student's experience and ability.

Amount of Time in Shop

At least twenty hours per week, thirty-six weeks each year.

CURRICULUM

Masonry 411, 412, 413, 421, 422, 423, 431, 432, 433	90 Hrs.
Eng. 211, 212, 213	15 Hrs.
Math. 335, 336	6 Hrs.

M. Sc.	12 Hrs.
and	
Phy. Ed.	6 Hrs.
Mech. Drawing, M. E. 311, 312	6 Hrs.
Carp. 311, 312	6 Hrs.
Cont. and Specifications M. E. 327	3 Hrs.
B. Adm.	10 Hrs.

Suggested Electives

Art 311, 312.
 Econ. 231, 234.
 Math. 315.
 Voc. Drawing I. A. 331, 332, 333.

COURSES

First Year

411. Bricklaying

Construction of walls, pillars, common bond walls, and structural bonds. Credit 10 (0-20).

412. Bricklaying

Construction of arches, corners and walls. Common bond, Flemish and English bond corners. Sills for doors and windows, setting of frames and flue construction. Credit 10 (0-20).

413. Bricklaying

Construction of buildings, blueprint reading and scaffold construction. Credit 10 (0-20).

Second Year

421. Tile and Stone Construction

Hollow tile walls, hollow brick and stone piers, pilasters with battered sides and structural bond. Credit 10 (0-20).

422. Tile and Stone Construction

Construction of segmental arches, semi-circular, and flat arches. Credit 10 (0-20).

423. Tile and Stone Construction

Laying off buildings. Pattern construction, mantels and chimney construction of brick or stone, irregular corners, fireplaces and Jack arches.

Third Year

431. Plastering and Cement Work

Study and use of tools, putting up laths, first cost of plaster work. Credit 10 (0-20).

432. Plastering and Cement Work

Concrete mixing, outside construction of walks and piers. Finish plaster coats, paving. Credit 10 (0-20).

433. Plastering and Concrete Work

Plastering on all types of lath, cement walk construction, laying out foundation and piers from blue prints. Credit 10 (0-20).

SHOE REPAIRING AND LEATHER WORK**Training Objectives**

To give the student a practical knowledge of the subject matter as well as the necessary training in the related subjects to permit both the operation and maintenance of a shoe repairing and leather work shop, and as skilled workers in the trade.

Length of the Course

Two years of nine months each.

Time in Shop

A minimum of 20 hours per week for 36 weeks each year.

CURRICULUM

Shoe Repair 411, 412, 413, 421, 422, 423	60 Hrs.
Math. 335, 336	6 Hrs.
Eng. 211, 212, 213	15 Hrs.
M. Sc. and Phy. Ed.	6 Hrs.
B. Adm.	10 Hrs.

Suggested Electives

B. A. 337, 346, 351, 332, 333, 335.

Ec. 231, 234.

Art 317, 318.

M. Shop 328, 329.

Elec. Wiring I. A. 326.

Sec. Sc. 317, 318.

COURSES**411-SR. Threads and Hand Tools**

The study of threads, breaking threads, making waxed ends and twisting bristles on ends. Making various stitches used in hand sewing. The names, care and use of hand tools, sharpening knives and other hand tools.

412-SR. Construction

The methods of fastening the parts of shoes together. The construction of shoes is then studied to enable one to make the proper repairs. Tempering and preparing leather for soles. Cutting off old soles, skiving shanks and preparing shoes for half soles and heels.

413-SR. Processing

Inks, waxes, dyes, cement and nails are studied. Cutting sole leather to save. Fitting soles and heels for nailing. Putting lifts on wood heels. Inking, burnishing and finishing shoes on power machines. The care, operation and use of the patching machine is studied. Special attention is given to rip sewing and neat upper patching.

421. Bench Work

All students having satisfactorily completed their first-year course in shoe-repairing will begin their second-year course in shoe-repairing with a brief review of the first year's work. Fitting half soles and heels on men's welted shoes. Putting top lifts and half soles on women's welted shoes. Putting new bottoms on men's and women's shoes. Care and use of the buffer and burnishing wheels of finishing machines. Sewing of welts, cutting of inner soles and attaching wood heels.

422. Machine Operation

Attaching wood heels on women's shoes. Study and operation of the sole cementing process. Care and operation of the edge trimmer and setter. Sharpening edge cutters. Manipulation and care of the power stitcher. Stitching soles on curved needle stitchers, operating auto soler and the mechanics of shoe machines.

423. Finishing and Shop Management

Problems pertaining to highclass repair work. Changing suede shoes to glazed finish. Dyeing shoes pastel shades and the reglazed process of changing colors. Problems and methods of buying materials. The operation and business methods of the modern commercial shop.

CARPENTRY**Training Objectives**

This course aims to develop in the student the knowledge and skills necessary for practical work in carpentry. Related technical knowledge, English, mathematics and drafting are also included.

Length of Course

Three years of nine months each.

Amount of Time in the Shop Per Year

Twenty hours per week for thirty-six weeks.

CURRICULUM

Carpentry 411, 412, 413, 421, 422, 423, 431, 432, 433	90 Hrs.
Eng. 211, 212, 213	15 Hrs.
Math. 335, 336	6 Hrs.
M. Sc.	12 Hrs.
Mech. Drawing 311, 312	6 Hrs.
B. Adm.	10 Hrs.
Welding 311, 312	6 Hrs.
M. Shop 328, 329	4 Hrs.
Phy. Ed.	6 Hrs.

Suggested Electives

B. A. 346, 351, 357. I. A. 326.

Math. 315.

Voc. Drawing I. A. 331, 332.

COURSES

First Year

411. Benchwork

This course consists of the study and practice of the fundamental operations in woodworking. Emphasis is placed upon the care and use of the most common woodworking tools.

412. Benchwork

Projects involving the various types of joints used by the carpenter are selected. Also the proper care and use of carpentry tools is stressed.

413. Building Repair

A certain amount of repair work is required. Only such repair work is selected as will give the student a fundamental understanding and appreciation of the principles of building construction.

Second Year

421. House Framing

Intensive study will be made of the framing square and its special uses to the carpenter. Methods of placing sills, type of girders, placing and bracing studs will be studied.

422. House Framing

Practical work in door and window framing will be given. The various types of roofs will be constructed in miniature. Application of the steel square to roof construction will be emphasized.

423. House Framing

This course involves study of western or platform construction, balloon and braced frame construction, the making and placing of door and window frames, covering floors, insulating materials, inferior trim, selecting and installing hardware.

Third Year**431. Stair Building**

Jobs involving the laying out, cutting and placing of straight run stringers, platform flights, dog leg flights, treads, riser, newels, skirting boards, rails, balusters, and forms for concrete work.

432. Roof Construction

Jobs involving the cutting, placing and nailing of common, jack, valleyed hip rafters by the use of the steel square.

433. Blueprint Reading and Estimating

Principles of orthographic projection. Drawing of plans and details of buildings. Estimating quantities.

CABINETMAKING AND UPHOLSTERING**Training Objectives**

To develop skilled workers in the manufacturing and repairing of furniture and cabinets. English, mathematics and drafting are required according to the needs of the students.

Length of Course

Three years of nine months each.

Amount of Time in the Shop per Year

Twenty hours per week for thirty-six weeks.

CURRICULUM

Cabinetmaking 411, 412, 413, 421, 422, 423, 431, 432, 433	90 Hrs.
Eng. 211, 212, 213	15 Hrs.
Math. 335, 336	6 Hrs.
M. E. 311, 312	6 Hrs.
Vocational Drawing I. A. 331, 332, 333	9 Hrs.
B. Adm.	10 Hrs.
M. Sc.	12 Hrs.
Phy. Ed.	6 Hrs.

Suggested Electives

M. E. 327.

I. A. 324.

Carp. 311, 312.

First Year

411. Care and Use of Tools

This course includes studying all common woodworking tools, sharpening cutting tools—grinding and whetting plane bits and chisels, filing auger bits, and sharpening saws. Projects involving the fundamental principles of joinery are provided. Credit 10(0-20).

412. Elementary Joinery

The student works on projects involving joinery with a view of gaining a high degree of dexterity. Square and circular table tops are built up with the use of glue. The work is performed mostly by hand. Credit 10(0-20).

413. Advanced Joinery

Much practice is given the student in the construction of projects involving mortise and tenon joints and dovetail joints. Projects such as tables, stands, cabinets, and chests give the student an opportunity to make practical application of joinery and at the same time to gain useful skills. Credit 10(0-20).

Second Year

421. Wood Turning

Care and use of woodworking machinery. Construction of a few simple projects involving spindle turning. Emphasis is placed on gaining facility with the turning tools and in duplicating pieces. Credit 10(0-20).

422. Wood Turning

Additional practice in spindle turning. Practice in face plate turning and in taper turning. Repairing broken table and chair legs so as to get experience in duplicating parts. Credit 10(0-20).

423. Wood Finishing

Filling, staining, waxing, varnishing, and enameling, refinishing of furniture. Credit 10(0-20).

Third Year

431. Upholstering

Projects involving the various types of caning, seat weaving and upholstery without springs. Credit 10(0-20).

432. Upholstering

Upholstering frame structures, springing up, methods of fastening webbing, stuffings, covering; the use of gimp, nails, springs, hard-edge upholstery, and spring-edge upholstery. Credit 10(0-20).

433. Cabinetmaking and Upholstering

The development of a comprehensive project involving cabinet work, finishing, and upholstering. This project should involve most of the fundamentals of cabinetmaking and upholstery. Credit 10(0-20).

PLUMBING AND STEAMFITTING**Objectives**

This course is designed to prepare skilled mechanics in the field of plumbing and steamfitting. In addition to courses listed, the department reserves the right to require trainees to spend at least one summer on grounds for practical work, unless they can furnish satisfactory evidence that they have had adequate practical experience in their trade.

Length of Course

Three years of nine months each depending upon the student's experience and ability.

Amount of Time in Shops

Twenty hours a week, 36 weeks per year.

CURRICULUM

Plumbing 411, 412, 413, 421, 422, 423, 431, 432, 433	90 Hrs.
Eng. 211, 212, 213	15 Hrs.
Math. 335, 336	6 Hrs.
M. Sc.	12 Hrs.
M. E. 311, 312	6 Hrs.
Welding 311, 312	6 Hrs.
B. A. Electives	10 Hrs.
Phy. Ed.	6 Hrs.

COURSES**First Year****411. Care and Use of Tools**

History of Plumbing: Duties and responsibilities of a plumber. Cutting, threading, reaming, and simple fittings. Study of plumbing material. Practical applications. Credit 10(0-20).

412. Draining and Vent Pipe Installations

Drainage pipe arrangements. Supports and connections between pipes. Applications, sewage disposal (field trips). Prerequisite Pl. 411. Credit 10(0-20).

413. Traps in Drainage Systems

Installation of traps and branch connections. Minor repairs. Prerequisite: Pl. 412. Credit 10(0-20).

Second Year**421. Plumbing Laws and Regulation**

Wiping joint, soldering and lead work. Blueprint reading. Prerequisite: Pl. 413. Credit 10(0-20).

422. Water Supply

Cold and hot water. Water treatment method and purification (field trips). Prerequisite: Pl. 421. Credit 10(0-20).

423. Estimating and Installation

This course consists of determining the cost of labor and materials for various installations. Prerequisite: Pl. 422. Credit 10(0-20).

Third Year**431. Steam and Hot Water**

The various heating systems. Tools and equipment used in steam-fitting. Sheet metal work. Mechanical equipment of buildings. Prerequisite: Pl. 423. Credit 10(0-20).

432. Welding and Brazing

Acetylene and electric welding in pipe work. Prerequisite: Pl. 431. Credit 10(0-20).

433. Copper Tubing and Fittings

Study and use of copper fittings. Soldering and lead work. Applications. Prerequisite: 432. Credit 10(0-20).

TAILORING**Objectives**

This course in tailoring covers three years of thorough training in making new garments such as: trousers, vests, coats, and overcoats. The course also includes repairing, altering and pressing which prepares a student for commercial work.

Length of Course

Three years of nine months each depending upon the student's experience and ability.

Amount of Time in the Shop

A minimum of 20 hours per week for 36 weeks each year is required.

CURRICULUM

Tailoring 411, 412, 413, 421, 422, 423, 431, 432, 433	90 Hrs.
Math. 335, 336	6 Hrs.
Eng. 211, 212, 213	15 Hrs.
M. Sc.	12 Hrs.

Art Elective	6 Hrs.
B. Adm.	10 Hrs.
Art 311, 312, 313	9 Hrs.
Phy. Ed.	6 Hrs.

COURSES

First Year

411. Care and Use of Tools

Care of shop and tools. Position on tailor's bench. Practice in use of needle, thimble, and the fundamental stitches which are essential to hand sewing. Students are required to make at least nine different stitches to be placed in a scrapbook for future reference. They are required to do various projects by hand and machine.

412. Pocket Making

Studying and classifying different types of pockets, such as piped pockets, side pockets, watch pockets and flap pockets. The top pockets, the half top pocket, and the quarter top are also studied in order to meet the demands of prevailing pocket style. Spacing and placing hip and side pockets.

413. Trousers Constructing

Joining and finishing uniform trousers, civilian trousers and overalls.

Second Year

421. Trousers Continued

Review of previous work. The sizes and length of trousers to be studied. The correct method of sewing on buttons, felling certain linings, making hemmed and cuff bottoms; shaping and pressing.

422. Vest Construction

Studying the various styles and types of vest pockets. Studying materials. Correct method of making pockets, studying the different types of facing and fronts; making backs, making straps, padding and shaping fronts, adjusting edge stay tape, joining backs and fronts, spacing buttonholes, sewing on buttons.

423. Working from Drafts

Review work. Cutting and making trousers and vests from draft, and block patterns, studying the styles of all garments previously made, comparing ancient and modern styles. The correct method of finishing past work in the proper manner to be practiced.

Third Year

431. Coats and Overcoats

Review of previous work. Coat and overcoat making. Studying changes that affect work in citizen's garment making.

432. Materials and Colors

Work on ordinary citizen's garments continued. Studying grades of material, estimating cost and quality of materials: working from drafts. Drafting trousers. Study of harmony in colors, drapery in garments.

433. Measuring, Drafting and Cutting

Measuring, drafting and cutting the garment studied. Students are required to make a suit to show proficiency. Study of current trade trends during the year.

WELDING**Training Objectives**

This is a carefully organized course designed to prepare young men and women inclined to become skilled Electric Arc Welders. The practical side of the course has been so emphasized that upon completion of the trade, students will be qualified to become owners or managers in Electric Arc Welding business as well as skilled mechanics in industry.

Length of Course

Twelve months. The time, however, will depend upon the student's experience and ability to pass standard tests.

Amount of Time in Shops

Twenty hours per week for forty-eight weeks.

CURRICULUM

Welding 411, 412, 413, 421	40 Hrs.
Eng. 211, 212, 213	15 Hrs.
Math. 335, 336	6 Hrs.
M. Shop M. E. 328	2 Hrs.
Mech. Drawing 311, 312	6 Hrs.

COURSES**411. Welding**

Electric arc welding. Care and operation of welding machines. A study of various welding rods and their uses. Current ratings for different kinds of welding. Practice in running beads and preparing work for welding. Credit 10 (0-20).

412. Welding

Horizontal and vertical joints. Practice in laying continuous beads with different types of rods. Practice in welding butt and lap joints. Credit 10 (0-20).

413. Welding

Vertical and Overhead joints. Practice in laying vertical and overhead beads. Intensive practice in selection of right type of rod for material used. Practice to prepare students to pass the American Welders Society Guide Bend Test. Credit 10 (0-20).

421. Welding

Oxy-Acetylene welding practice on various joints in all positions. Care and adjusting of equipment. Cutting and brazing on light and heavy work. Welding and brazing of different types of metals. Credit 10 (0-20).

ELECTIVE VOCATIONAL COURSES

These courses are designed for those students pursuing the regular college courses, and yet desiring some training in vocational fields. The students are given thorough drilling and are required to attain a knowledge of the subject matter. The courses are offered on the college level and regular college credit is allowed.

311. Auto Mechanics

Construction and operation of power system. Fuel and cooling systems. Lubrication, washing and polishing. Repair of tires. Credit 3 (0-6).

312. Auto Mechanics

Study of ignition system, wiring and lighting system, batteries and their care, starter and generators. Credit 3 (0-6).

313. Auto Mechanics

Minor repairs to safety devices. Brake adjustments. Credit 3 (0-6).

311. Cabinet Making

Care and use of hand tools, wood turning, pattern making, or work to suit individual interest. Credit 3 (0-6).

312. Cabinet Making

Care and use of power tools. Built-in cabinet. Small projects as desk, bookcase or useful projects for the home. Credit 3 (0-6).

313. Cabinet Making

Inside trim. Varieties and characteristics of timber used in projects. Applying hardware, application of stain, varnish, shellac and enamel. Credit 3 (0-6).

314. Cabinet Making

General building and repair work in furniture and cabinet construction. Prerequisite: I. A. 323. Credit 3 (0-6).

311. Carpentry

Study and use of hand tools. Types of joints used in construction. General framing and bracing. Credit 3(0-6).

312. Carpentry

Blueprint reading and estimating of quantities. General construction of small projects of roof covering. Credit 3(0-6).

313. Carpentry

Stair building. General roof construction. Flooring. Experience on practical building. Credit 3(0-6).

314. Carpentry

General building and repair work in carpentry. Prerequisite: I. A. 323 or the equivalent. Credit 3(0-6).

311. Dry Cleaning

A study of steps necessary to complete a cleaning job. Methods of marking and assembling clothes. Some cleaning room practice. Credit 3(0-6).

312. Dry Cleaning

A study of finishing room tactics. Actually finishing silk and wool garments. Credit 3(0-6).

313. Dry Cleaning

General theory on dry cleaning operations. Plant Management. Credit 3(0-6).

314. Dry Cleaning

(Hat Blocking). Methods of cleaning and blocking ladies' and men's hats. Credit 3(0-6).

311. Laundry Management

Assorting, classifying and loading of washers and extractors. Theory and practice. Credit 3(0-6).

312. Laundry Management

Receiving, marking and inspection of garments. Credit 3(0-6).

313. Laundry Management

Finishing, hand and machine care and maintenance of equipment. Credit 3(0-6).

311, 312, 314. Mechanical Drawing

See write-up under Mechanical Engineering courses. Credit 3(0-6).

311. Masonry

Types of brick and their use in construction. Mortar mixing, thickness of joints, tools and practice work. Credit 3(0-6).

312. Masonry

Study of mortars, bonds, joints, pointing up. Practice work. Credit 3(0-6).

313. Masonry

Estimating, arches, lintels, chimneys and fireplaces. Practical jobs. Credit 3(0-6).

311. Plumbing

Care and use of tools: History of plumbing: Duties and responsibilities of a plumber. Cutting threading, reaming, and simple fittings. Study of plumbing material. Credit 3(0-6).

312. Plumbing

Drainage and vent pipe installation: Drainage pipe arrangements. Supports and connections between pipes. Sewage disposal. Prerequisite: Pl. 411. Credit 3(0-6).

313. Plumbing

Installation of traps and branch connections. Minor repairs. Prerequisite: Pl. 412. Credit 3(0-6).

311. Radio

This course consists of Ohm's and Kirchoff's Laws, study of radio symbols and schematic diagrams, voltmeters, ohmmeters, current and voltage measurements, radio principles, continuity checks, and fundamental shop techniques.

312. Radio

This is a continuation of 311 with emphasis on the function of capacitors and inductors in A.C. and D.C. circuits, diagram studies of the superheterodyne receiver.

313. Radio

Vacuum tube characteristics, Piezo-electric effect, phonograph pick-ups and amplifiers, vibrator power supplies, and servicing of automobile receivers.

311. Shoe Repairing

The study of threads, making waxed ends and twisting bristles on ends. Stitches used in hand sewing. Care and use of hand tools for leather work. Credit 3(0-6).

312. Shoe Repairing

Construction. Methods of fastening parts of shoes together. Tempering and preparing leather for soles. Preparing shoes for half soles and heels. Ink dyes, cement and nails are studied. Bench work. Credit 3(0-6).

313. Shoe Repairing

Machine operation. Care and use of power stitcher. Cement process. Sewing of welts and cutting. Curved and straight needle stitchers. Finishing. Changing of color. Credit 3(0-6).

314. Shoe Repairing

Leather Craft. History of leather craft. Types of leather, tools and their uses. Lacings, slitting, tooling, stamping, dyeing, pattern cutting and the use of cement. Making of key cases, coin purses, bill folds and hand bags. Credit 3(0-6).

311. Tailoring

Care and use of tools. Practice in use of needle and thimble. Study and application of stitcher to different stitches. Credit 3(0-6).

312. Tailoring

Study and classification of materials. Practice in making pockets, buttonholes and backstitching. Machine sewing. Credit 3(0-6).

313. Tailoring

Material and colors. Matching for color. Relining of coat and pockets. Pressing. Credit 3(0-6).

311. Welding

Oxy-Acetylene Welding. The purpose of this course is to give students a knowledge and understanding of the welding process and its possibilities. A knowledge of the limitation of the process, of the apparatus used, of the common metals, their composition, their properties and methods of identification. Practice work. Credit 3(0-6).

312. Welding

Continuation of 311 with practice in more difficult welds. Credit 3(0-6).

313. Welding

Electric Arc Welding. A study of the different types of metals and welding rods to be used with steel, cast iron, malleable iron and more common metal. Skill in handling the welding machine as applied to practical jobs. Credit 3(0-6).

HONORS AND AWARDS, 1950

1. Charles L. Cooper Award for Excellence in Industrial Arts.
Winner—Frank Junious Brake, Wilson, North Carolina.
2. Spaulding Medal for Excellence in the School of Agriculture.
Winner—Willie J. Walls, Chadbourn, North Carolina.
3. Saslow's Inc. Medal for the Best Record in the School of Education and Science.
Winner—Gertrude G. Lee, Newark, New Jersey.
4. Saslow's Inc. Medal for the Best Record in Social Science.
Winner—Gertrude G. Lee, Newark, New Jersey.
5. The Merrick Medal for All-Round Excellence in the School of Mechanic Arts.
Winner—William Lewis Bedford, Lansdowne, Pennsylvania.
6. The Agricultural Association Awards to the two Juniors with Best Records for Eight Quarters in Agriculture and Home Economics, respectively.
Winner—Maurice Riddick, Pantego, North Carolina; Alease Massenberg, Stony Creek, Virginia.
7. The Intercollegiate Dramatic Association Keys awarded to persons who have rendered four years of successful performance in major college plays.
Winners—Serena Owens, Charleston, South Carolina; Bluetta Jenkins, Charleston, South Carolina; Dorothy Pettit, Dillsboro, North Carolina.
8. Richard B. Harrison Players College Key Awards.
Winners—Serena Owens, Charleston, South Carolina; Bluetta Jenkins, Charleston, South Carolina; Dorothy Pettit, Dillsboro, North Carolina.
9. Gold Trophy Statuette to the "Best Actor" of 1949-50.
Winner—Bluetta Jenkins, Charleston, South Carolina.
10. Silver Trophy Statuette to the "Most Dependable Player" of 1949-50.
Winner—Serena Owens, Charleston, South Carolina.
11. Silver Loving Cup Award to the "Most Cooperative Player" of 1949-50.
Winner—Serena Owens, Charleston, South Carolina.

12. The William H. Foushee Memorial Scholarship Cup Award to the Member of the Junior Class with the Highest Scholastic Average.
Winner—Henry Hyman, Jamaica, New York.
13. The Rand-Hawkins-McRae Trophy for Three Years' Service in Debating.
Winner—Levi Fonville, Jacksonville, North Carolina.
14. Kappa Phi Kappa Key for Proficiency in Debating.
Winner—Levi Fonville, Jacksonville, North Carolina.
15. The Susie B. Dudley Scholarship of \$100.00 presented by Mrs. L. J. Spaulding, Real Estate Agent, to a student in the Graduate School for research on the life and work of Mrs. Susie B. Dudley.
Winner—Juanita D. Jones, Ringgold, Virginia.
16. The Register's Award for Two Years' Meritorious Service on the Staff of "The Register."
Winners—Agnes J. Brown, Laurinburg, North Carolina; Frank Bowden, Goldsboro, North Carolina; James A. Long, Jacksonville, Florida; Thomas Richardson, Warrenton, North Carolina; Macy P. Wright, Warrenton, North Carolina; Jennie M. Smith, East Spencer, North Carolina.
17. Band Awards for Four Years' Meritorious Service in the College Band.
Winners—Charles Armstrong, High Point, North Carolina; James Faison, Wilmington, North Carolina; Melvis Hooper, Roanoke, Virginia; Levi Gee, Laurinburg, North Carolina; Clarence J. Yourse, Greensboro, North Carolina; William A. Smith, Charlotte, North Carolina.
18. The Gate City Chapter, Alumni Association Award to the graduating senior who has rendered the Most Distinctive Service in Interpreting the Ideals of the College to the Community.
Winner—James Alexander Long, Jacksonville, Florida.
19. A. and T. College Choral Society for Four Years' Meritorious Service.
Winners—Lewis E. Cameron, Greensboro, North Carolina; Ruby Corry, Gaffney, South Carolina; Samuel E. Guy, Greensboro, North Carolina; Seth McCoy, Greensboro, North Carolina; Macy P. Wright, Warrenton, North Carolina.
20. A. and T. College Choral Society's Award for Three Years' Meritorious Service.
Winners—Mae C. Johnson, Greensboro, North Carolina; Hazeline Spencer, Greensboro, North Carolina; James S. Thornton, Nathalie, Virginia.

21. A. and T. College Choral Society's Award for Two Years' Meritorious Service.
Winners—William L. Butler, Orangeburg, South Carolina; Berlena Campbell, Lillington, North Carolina; Joseph Fennell, Bainbridge, Georgia; Frances M. Lancaster, Farmville, Virginia; William Keen, Roanoke, Virginia; Winford L. Morgan, Wilson, North Carolina; James A. Stancil, Weldon, North Carolina; Fred Tidwell, New York City, New York; Arenthia Tatum, Chattanooga, Tennessee; Peggy J. Waddell, Spindale, North Carolina.
22. The Pan-Hellenic Council Scholarship Award of \$50.00 to the student with the best record in scholarship and deportment.
Winner—Henry Hyman, Jamaica, New York.
23. The Philadelphia Chapter, Alumni Association Medal for the Best All-Round Athlete in the graduating class.
Winner—Robert H. Jackson, Allentown, Pennsylvania.
24. The Fellowship Council Award for Meritorious Service in Religious Activities.
Winners—Agnes J. Brown, Laurinburg, North Carolina; Tarleton Davis, Robersonville, North Carolina; Hubert Ford, Lake View, South Carolina; Chester Hawkins, Jackson, North Carolina; Willie J. Walls, Chadbourn, North Carolina.
25. The Alpha Phi Alpha Scholarship Award of \$75.00 to the Sophomore Student with the best scholastic record above a "B" average and qualities of leadership.
Winner—James W. Slade, Edenton, North Carolina.
26. The Beta Iota Omega Chapter, Alpha Kappa Alpha Scholarship Award of \$50.00.
Winner—Dolorise Phillips, Greensboro, North Carolina.

GRADUATING SENIORS WHO HAVE ATTAINED MEMBERSHIP IN SCHOLASTIC AND SCIENTIFIC HONOR SOCIETIES

Alpha Kappa Mu Honor Society

William Bedford	Gertrude G. Lee	James H. Lilly
Willie T. Ellis	Serena Owens	John C. Miller
	Willis H. Clemont	

Beta Kappa Chi Scientific Society

Willis Clemont	Leophas Ford	William Bedford
Robert Bradley	James H. Lilly	Walter White
	John Tarpley	

Sigma Rho Sigma Honor Society

Agnes J. Brown	John C. Miller	Serena Owens
Henry Debnam	Alphonso Parks	

TRADE CERTIFICATES, 1950

Auto Mechanics—Adkins, James A.; Bell, Charles W.; Cannon, Theodore; Coley, William; Cooke, George; Corbett, Eddie; Daniel, William Lee; Dial, Ruben; Donnell, Robert; Edwards, Ralph Lee; Everett, Wilson E.; Gillis, Zero; Godwin, Lloyd; Graves, Hubert; Greene, Reynolds; Hart, Joe; Hazel, Joseph; Holloway, Quentin; Humphery, George; Jay, Ivory; Jones, David; Jones, Edward; Jordan, Edward; Miller, William; Mitchell, Abraham; Moore, Aaron; Nicholson, Samuel; Overby, Robert; Payne, Horace; Pierce, George; Pines, Samuel; Powell, Richard; Reid, Arthur; Reid, Lorenzo; Russell, James; Sadler, Joel; Slater, Thomas; Spruill, Elijah; Stringer, Herbert Lee; Tillman, William; Tuning, Lee Roy; Ward, Howard; Williams, Hardy James; Wilson, Cole; Wragg, David; Wright, Willie; Wynn, Claud.

Cabinet Making—Baldwin, Jerry; Daniels, Wailey; Dudley, Paul; Harris, Curtis; Manning, Luther; Powell, Joseph; Richardson, Willis.

Carpentry—Baker, Bernard; Best, Thaddeus; Caul, Robert; Downing, John; Harvey, James; Marshall, Albert; Montague, Luther; Singleton, Samuel; Stancil, James Allen.

Dress Making—Alston, Celestine T. Mae; Cumber, Sara; Degraffenriedt, Dicie; Hinnant, Bettie; McClanahan, Rachel.

Electrical Wiring—Harris, John; Hodge, Robert; Henighan, Navon.

Masonry—Badham, Clarence; Black, Raymond; Byrd, Ogil George; Cooke, Ervin Lee; Crawford, James Lee; Edwards, William H.; Hargraves, Henry Dennis; Howell Gilbert; Jones, Harold Edward; Kennedy, Manley William; McCabe, Isaiah; McMillian, Garfield; Means, Lawson Dewey; Rogers, William H.; Siler, William; Smalls, Nathaniel.

Machine Shop—Fisher, Oscar; Linney, Chauncey.

Plumbing—Robinson, Edward V.

Radio Repairing—Best, Wesley; Dean, Royster; Gibbs, John R.; Little, Charles; Mills, Albert; Newell, William D.; Parker, James L. R.; Redmond, Sidney; Rice, William; Stepter, Albert; Walton, Charles; Wiggins, H. Nolan.

Shoe Repairing—Burney, Grover; Crawford, Lawrence; Harper, Paul L.; Harrell, Robert; Person, Colon Eric; Pettis, Kyle; Shepard, Edgar; Sligh, John H.; Tillman, Daniel; Wilson, Woodrow.

52 Tailoring—Allen, Thomas; Anderson, Junior; Avent, Walter; Ball, Gerald; Ballard, James; Baskerville, David; Blair, James C.; Blue, Nathaniel; Campbell, Foster Burnett; Chisholm, Randolph; Cooper, Joseph Lenwood; Debnam, Robert Maxwell; Dorsett, Warren; Eaton, Aubrey; Foster, Jacqueline; Gilreath, Rosetta; Groves, Clayton; Hamm, Wade Wilbert; Hill, David; Holloman, James; Hough, Ernest; Johnson, Velma; Joyner, Eddie; Lamb, Albert Henry; Lee, Magalene; Logan, Fred; Minor, Wallace; Nance, Dorothy; Norman, Henry Everett; Paden, Grier Lee; Perry, Lee Roy; Poole, Edward Leon; Reese, Blevins; Reid, Robie; Rhoe, T. Van B.; Rice, Walter E.; Richardson, Norris; Rivers, Eugene; Robinson, Randolph; Robinson, Wilburn; Rogers, Ulysses; Sadler, Peter; Smith, Simmie; Thompson, David; Thompson, Rudolph; Walker, Cal; Washington, Melvin; Washington, Theodore; Watson, Climmie; Whitaker, Johnnie; White, Eric B.; Wright, McGuire C.

Welding—Swinson, Calvin.

COMMISSIONED AS SECOND LIEUTENANTS IN THE REGULAR
ARMY OF THE UNITED STATES

William D. Glover

William B. Neal

James H. Lilly

COMMISSIONED AS SECOND LIEUTENANTS IN THE
ORGANIZED RESERVE CORPS (INFANTRY)
OF THE UNITED STATES ARMY

Charles R. Armstrong

Albert Brown, Jr.

Carter R. Perry

Julian E. Cheek

William R. Edmonds

Elijah H. Girven, Jr.

George M. Hampton

Leon O. Henry

Lawrence B. Hooper

Dessaussure C. Kennedy

Roy E. Kimble

George G. Latham

Isaiah V. Oglesby, Jr.

Rowe R. Motley

Manuel Reaves, Jr.

Bill B. Rice

Paul L. Ross

Robert L. Smith

Ardey H. White

DEGREES CONFERRED MAY 29, 1950

RANKING STUDENTS

With Highest Honor	Gertrude G. Lee
With Highest Honor	James Henry Lilly
With Highest Honor	Willie J. Walls
With High Honor	William L. Bedford
With High Honor	Willie Thomas Ellis
With High Honor	John Clifford Miller
With Honor	Robert Bruce Bradley
With Honor	Willis H. Clemont
With Honor	Elizabeth G. Beverly Gaddy
With Honor	William David Glover
With Honor	Otto Delano Harris
With Honor	Serena Elizabeth Owens
With Honor	Martha Cardell Rue
With Honor	J. Walter Tyson

BACHELOR OF SCIENCE IN AGRICULTURE

James Arthur Adams.....	844 Green St., New Bern, N. C.
Turner Battle.....	P. O. Box 493, Battleboro, N. C.
Charles E. Bennett.....	10 Sykes Avenue, Wadesboro, N. C.
Roman Peele Blount, Jr.....	810 S. George St., Farmville, N. C.
John Brown, Jr.....	Star Route, Box 45, Supply, N. C.
Convey H. Burwell.....	Rt. 1, Box 164, Clarksville, Va.
Frank Benjamin Bynum, Jr.....	534 E. Nash St., Wilson, N. C.
Isaiah Lafayette Carson.....	Route 2, Cherryville, N. C.
Otis J. Cobb.....	115 Garst St., Dayton, Ohio
Benjamin Currence	P. O. Box 604, Bessemer, N. C.
Alexander Daniels, Jr.....	Rt. 1, Box 42, Jackson Springs, N. C.
Russell Edward Davis.....	305 West Preston St., Selma, N. C.
Tarleton Davis.....	Rt. 2, Box 2, Robersonville, N. C.
Claude C. Draughn	515 St. Mark Street, Petersburg, Va.
Robert L. Dobson.....	1522 Pittsburg Ave., Winston-Salem, N. C.
Willie Thomas Ellis.....	Whiteville, N. C.
Rembert A. Gaddy	Rt. 3, Box 237, Wadesboro, N. C.
Irving K. Gilliam	1207 E. Belews St., Winston-Salem, N. C.
William David Glover.....	Rt. 3, Box 284, Durham, N. C.
Odessa Graham.....	P. O. Box 291, Fair Bluff, N. C.
Paul Linwood Halsey.....	Box 83, Creswell, N. C.
Titus Harper	Box 21, Thomasville, Ala.
James H. Harris.....	Rt. 1, Box 132, Dover, N. C.
William T. Henderson.....	Rt. 3, Box 306, Henderson, N. C.
John A. Hollingsworth, Jr.....	245 E. Temple St., Owego, N. Y.

Jonas Everett Johnson.....	20	Magnolia Ave., Asheville, N. C.
Robert Lee Jones	215	H Street, Jenkinsville, S. C.
Joshua W. Kearney	19	W. Green St., Franklinton, N. C.
Maurice C. Lane	125	E. Hillsboro St., Mt. Olive, N. C.
James Arthur Lawrence.....	Rt. 3,	Box 88, Rocky Mount, N. C.
Robert Lincoln LeSueur.....	Rt. 1,	Box 256, Madison, N. C.
Samuel David Little.....		Pinehurst, N. C.
Mansel Philip McCleave	Rt. 2,	Siler City, N. C.
Charles Edward McNeill.....	Rt. 1,	Box 129, Lumber Bridge, N. C.
Cecil Julius Mingia.....	616	Logan St., Greensboro, N. C.
Eugene Gary Mobley.....		Chester, S. C.
James LaFon Moore	Rt. 1,	Box 256, Latta, S. C.
John E. Moore.....	Rt. 5,	Box 222, Greenville, N. C.
Samuel Moore.....	Rt. 2,	Box 173, Lillington, N. C.
Clyde F. Page.....	Rt. 1,	Box 17, Lumberton, N. C.
Henry Daniel Pridgen.....	Rt. 2,	Box 273, Whiteville, N. C.
Mansy J. N. Pullen.....	Rt. 1,	Box 168, Littleton, N. C.
Herbert Junius Richardson.....	Rt. 2,	Box 168, Apex, N. C.
Carl Rorie, Jr.....	Rt. 5,	Box 27, Monroe, N. C.
Joseph Henry Lee Russell.....	Rt. 1,	Box 144, Manson, N. C.
Hughue Fred Simons.....		Star Route, Winfall, N. C.
Arthur Slade.....	Box 218,	Williamston, N. C.
Raymond Pernell Smith.....	Rt. 1,	Box 148, Winterville, N. C.
James E. Stewart.....	404	Lawson St., Durham, N. C.
John Wilham Tate.....	307	Pine St., Lexington, N. C.
Hubert W. Taylor.....	419	Bennett St., Greensboro, N. C.
Richard Waddell Thacker.....	Rt. 6,	Box 100, Reidsville, N. C.
Edgar Banks Thompson.....	806	Apple St., Burlington, N. C.
Dennis Howard Tilford.....		Ingold, N. C.
Marcus Garvis Townsend.....	Rt. 2,	Dillon, S. C.
Nathaniel A. Villines.....	Rt. 2,	Box 129, Hurdle Mills, N. C.
Willie Joe Walls.....	Rt. 1,	Box 9, Chadbourn, N. C.
Herman Lee Watson.....	Rt. 1,	Box 50, Cofield, N. C.
William Watson.....	1523	Swift St., Jacksonville, Fla.
James LeRoy Wilder.....	515	Wood St., Wilmington, N. C.
George Lawrence Williams.....	144	C Street, Lake Wales, Fla.
Olyn M. Wilson.....	204	Steelawanna Ave., Lackawanna, N. Y.

BACHELOR OF SCIENCE IN HOME ECONOMICS

Jessie M. Carney.....	2318	E. Market St., Greensboro, N. C.
Juanita Odessa Cross.....	122	S. 5th St., Suffolk, Va.
Mamie Rose Debnam.....	Rt. 1,	Middlesex, N. C.
Estella Dicks.....	64	Kressan Rd., Hadowfield, N. J.
Bertha Louise Everett.....	Rt. 3,	Box 70A, LaGrange, N. C.
Fannie Madgelena Garrett.....	Rt. 2,	Box 131, Greensboro, N. C.
Doris Murphy Hamilton.....	2729	Broad Creek Rd., Norfolk, Va.

Estelle Irving.....Rt. 3, Box 30, Petersburg, Va.
 Bluetta Cleo Jenkins.....61 Logan St., Charleston, S. C.
 Erlene Gertrude Pickens.....643 W. 24th St., Winston-Salem, N. C.
 Alise Simmons.....103 S. 13th St., Wilmington, N. C.

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

James Grant Andrews.....611 E. 4th St., Winston-Salem, N. C.
 Barney C. Brown.....2 Ridge St., Asheville, N. C.
 Raymond H. Brown.....508 Steel St., Sanford, N. C.
 Willie James Bryson, Jr.....313 W. Lincoln Ave., Gastonia, N. C.
 Lewis Enoch Cameron.....454 Gorrell St., Greensboro, N. C.
 James Manuel Clark, Jr.....113 N. Luther St., Greensboro, N. C.
 Arthur M. Cole.....1206 Gorrell St., Greensboro, N. C.
 Edwin Louis Elliott.....461 Salisbury St., Wadesboro, N. C.
 Harry C. Evans.....401 Concord St., Salisbury, N. C.
 Henry Fennell.....Gen. Delivery, Rose Hill, N. C.
 James E. Garfield.....908 Pavie Ave., New Bern, N. C.
 Maxie Eugene Gerald, Jr.....258 Dixon St., Mullins, S. C.
 John Hampton.....1212 N. Claremont Ave., Winston-Salem, N. C.
 Levi Harley.....559 Horse Shoe St., Spartanburg, S. C.
 Malcolm Hunter.....735 Chestnut St., Henderson, N. C.
 Purvis Inman.....125 Linden St., Fairmont, N. C.
 Denver R. Jones.....339 6½ Street, S. W., Charlottesville, Va.
 Milas D. Kelly.....225 N. Olive St., Media, Penn.
 William Montgomery King.....1201 Pittman St., Waycross, Ga.
 David D. Lowery.....1426 E. 4th St., Winston-Salem, N. C.
 Daniel J. McLaurin.....606 Taft St., Laurinburg, N. C.
 John W. McQueen.....Rt. 1, Box 155, Red Springs, N. C.
 David Leroy Mizelle.....201 N. Elm St., Williamston, N. C.
 Henry Moore.....Rt. 4, Box 151, Gainesville, Fla.
 Seldon Murchison.....Shawtown, Box 111, Lillington, N. C.
 Henry Erma Noyes.....1864 7th Ave., New York, N. Y.
 James C. Oakley, Jr.....Box 23, Carrollton, Ala.
 David Powell.....Box 111B, Winnsbow, N. C.
 Lewis Thomas Richardson.....Rt. 2, Box 3, Spring Hope, N. C.
 Wallace Ruffin.....Rt. 1, Box 100, Garysburg, N. C.
 Hubert V. Simmons.....801 Panola St., Tarboro, N. C.
 Madie Lee Simpson.....810 S. Church St., Charlotte, N. C.
 Johnny Leon Stiggers.....803 Sevier St., Greensboro, N. C.
 Andrew Dalton Summers.....Harmony, N. C.
 Mildred Valentine.....P. O. Box 84, Due West, S. C.
 Johnnie J. Walker.....Gen. Delivery, Hobson, N. C.
 Myles Whitehurst.....P. O. Box 43, Mackeys, N. C.

BACHELOR OF SCIENCE IN COMMERCIAL EDUCATION

Iris Leverne Anglin.....	201 Holt St., Martinsville, Va.
Rosa Mae Beasley.....	Rt. 1, Box 137, Tyner, N. C.
Olrin J. Boone.....	Rt. 2, Box 172, Enfield, N. C.
Francena Remonia Boykin.....	1521 N. Campbell St., Camden, S. C.
Geneva Bradley.....	204 King St., Wilmington, N. C.
Lottie Brevard.....	Rt. 3, Box 20, Camden, S. C.
Carrie Rebecca Campbell.....	159 President St., Charleston, S. C.
Lois M. Clemmons.....	Box 768, Southport, N. C.
Jessie Mae Collins.....	Rt. 3, Box 100, Camden, S. C.
Hazeline Daye.....	P. O. Box 321, Burlington, N. C.
Jennie Lee DeVeaux.....	1 Lennox St., Charleston, S. C.
Claressa Alethya Doulgas.....	833 N. Oakland Ave., Florence, S. C.
Joseph Preston Fulcher, Jr.....	P. O. Box 32, Bath, N. C.
Elizabeth Grace Beverly Gaddy..	1718 McConnell Rd., Greensboro, N. C.
Willmon Franklin Gadsden.....	809 English St., Greensboro, N. C.
James William Hairston.....	Rt. 4, Box 62, Martinsville, Va.
Robert Edgar Harrell.....	436 31st St., Newport News, Va.
Sadie Australia Hayes.....	1923 Lutheran St., Greensboro, N. C.
Roberta Louise Herbert.....	607 N. Jefferson St., Florence, S. C.
Elizabeth Ann Joyce.....	1620 E. 11th St., Winston-Salem, N. C.
Thelma Lee.....	1301 S. Alston Ave., Durham, N. C.
Rosa Lee Lewis.....	Dublin, N. C.
Angela R. McCoy.....	2528 Ruffin St., Norfolk, Va.
Marie Corpening McNeill.....	310 Gray St., Durham, N. C.
Annie Janice Mills.....	303 Maple St., Pulaski, Va.
Mamie R. Correll Morris.....	821 W. Fisher St., Salisbury, N. C.
Ethel Mae Mosley.....	1611 8th St., Lynchburg, Va.
Daisy Belle Rollins.....	Box 173, Jonesboro Hts., Sanford, N. C.
Martha Cardel Rue.....	326 W. Pine St., Goldsboro, N. C.
Leroy Junious Saunders.....	Rt. 1, Box 24, Holland, Va.
Blanche Rosell Smith.....	Rt. 1, Box 98-A, Warsaw, N. C.
Cetire Elois Streater.....	Box 186, A. and T. College, Greensboro, N. C.
Esther Naomi Troxler.....	609 Watson St., Greensboro, N. C.
Marvin C. West.....	31-A Daniel Brooks Homes, High Point, N. C.
Evelyn Mona Young.....	P. O. Box 784, Martinsville, Va.

✓ **BACHELOR OF SCIENCE IN ARCHITECTURAL ENGINEERING**

J. Walter Tyson.....	817 Hilltop St., High Point, N. C.
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✓ **BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING**

Floyd Allen.....	841 Bridge St., Elkin, N. C.
Isaac Banks.....	Winnsboro, S. C.
William Lewis Bedford.....	67 Bartram Ave., Lansdowne, Penn.

Alton Warren Brisbane.....	205 Water Ave., Savannah, Ga.
William Callender.....	809 Church St., Clifton Forge, Va.
Willis Hawkins Clemont.....	Rt. 1, Box 18, Forest, Va.
Henry Cook.....	Box 126, Warrior, Ala.
Nathaniel Dargan.....	1417 Gorrell St., Greensboro, N. C.
Roger Anderson Davidson.....	1320 Floyd St., Lynchburg, Va.
Alexander Graves, Jr.....	222 North Booker St., Greensboro, N. C.
James Hargrave.....	414 Martin St., Charlotte, N. C.
Alexander Hastie.....	Rt. 1, Box 153, Sumter, S. C.
Raymond Alexander Hill.....	625 Montgomery St., Savannah, Ga.
John Hinton Jones, Jr.....	Box 188, Warrenton, N. C.
Nathaniel Ladson.....	257 Stuyvesant Ave., Brooklyn, N. Y.
Andrew Barton Lucas, Jr.....	1334 29th St., Newport News, Va.
James Davis Sampson.....	1006 S. Center St., Mount Olive, N. C.
Jesse Walter Smith.....	Box 1, Morningside Station, New York, N. Y.
John Lee Tarpley.....	Rt. 1, Box 187, Greensboro, N. C.
William M. Thornton.....	1304 Lindsey St., Greensboro, N. C.
Walter Raleighston White.....	11 Newberry St., Jacksonville, N. C.
Edward Taylor Williams.....	106 Hartley St., Lenoir, N. C.
Herfue Williams.....	941 Marshall Ave., Norfolk, Va.
Raymond Clifford Williams	East Gastonia, N. C.

✓ BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Robert Bruce Bradley.....	716 S. 18th St., Springfield, Ill.
Hubert Ford.....	Rt. 1, Box 11, Lake View, S. C.
William Lafayette Herring, Sr.....	132 5th St., Lackawanna, N. Y.
Floyd Harrison Pelham.....	78 Mitchell Court, Kinston, N. C.
Thurlis Aaron Satterthwaite.....	P. O. Box 44, Roper, N. C.
Lester Purnell Wiggins.....	Rt. 4, Box 33, Zebulon, N. C.
Carson Chester Wright.....	136 Patchen Ave., Brooklyn, N. Y.

BACHELOR OF SCIENCE IN INDUSTRIAL EDUCATION

John Willis Baird.....	Rt. 2, Box 163, Woodsdale, N. C.
Jasper Bellamy.....	813 Mears St., Wilmington, N. C.
Roscoe J. Betsill.....	2300 Logan St., Columbus, Ohio
James Roderick Blount.....	2864 28th Court, Birmingham, Ala.
Frank Junious Brake.....	1306 E. Nash St., Wilson, N. C.
William Prescott Coleman.....	1213 5th St., Lynchburg, Va.
Rommie H. Davis.....	Rt. 2, Box 376, Nashville, N. C.
Calvin Ray Freeman.....	Rt. 1, Chesnee, S. C.
Levi Sylvester Gee, Jr.....	713 Harrison St., Laurinburg, N. C.
William Rankin Gibson.....	207 Dickson St., Laurinburg, N. C.
Earl Gordon.....	Box 44, Southport, N. C.
Aaron William Greene.....	Rt. 2, Box 303, Trenton, N. C.

David Alton Hall.....Box 5, Proctorsville, N. C.
 James Lloyd Herring.....Rt. 1, Box 91, Wallace, N. C.
 Charles William Hickman.....Rt. 1, Kings Mountain, N. C.
 Roscoe Cecil Hood.....Rt. 1, Box 90, Lancaster, S. C.
 John Edward Jenkins.....1013 Lehigh St., Rocky Mount, N. C.
 John Walcott Kay.....125 West Cabarrus Street, Raleigh, N. C.
 Octavius Lucas, Jr.....Rt. 1, Box 62, Rocky Mount, N. C.
 Rodney Johnson McNeill.....Box 403, Clarkton, N. C.
 James Leonard Martin.....Warsaw, N. C.
 Laban Calvin Maultsby.....Rt. 1, Box 230, Ocala, Fla.
 Joseph Charles Miller.....Box 915, Salisbury, N. C.
 Joseph Alfred Morris.....115 St. George St., Southport, N. C.
 James W. Perry1110 Gay St., Rocky Mount, N. C.
 Warren G. Polson.....Rt. 1, Box 130, Corapeake, N. C.
 Alvin Grant Richards, Sr.....111 Halifax St., Suffolk, Va.
 John Wayne Rogers, Sr.....Rt. 3, Box 117, Raleigh, N. C.
 Edward Knox Shipman.....P. O. Box 93, Lumberton, N. C.
 Elliott Dudley Smith.....Rt. 2, Box 72, Rose Hill, N. C.
 John Wesley Southerland.....515 High St., Thomasville, N. C.
 Al Hoover Thompson.....1916 N. Payson St., Baltimore, Md.
 John Wesley Tillery.....1003 Bay St., Morehead City, N. C.
 Leander Carson Turner....11-A Daniel Brooks Apt., High Point, N. C.
 William R. Windley.....612 Pine St., Beaufort, N. C.

BACHELOR OF SCIENCE IN FINE ARTS

James William Anthony, Jr.....P. O. Box 434, Kershaw, S. C.
 Charles Edward Brinkley.....120 W. Albemarle St., Edenton, N. C.
 Howard L. Burchette.....Box 164, Warrenton, N. C.
 Rufus CauserRockingham, N. C.
 David R. Clark.....1008 E. Bragg St., Greensboro, N. C.
 Conrad Lanier Forbes.....805 W. 25½ Street, Winston-Salem, N. C.
 Harold Laymont James.....739 Southern Ave., Fayetteville, N. C.
 Thomas Lee Richardson.....Box 276, Warrenton, N. C.

BACHELOR OF SCIENCE

Connie Allison.....Rt. 2, Box 118, Huntersville, N. C.
 William Lionel Andrews.....10 Bagley St., Portsmouth, Va.
 Norma Olene Banks.....1607 Roger Street, Greensboro, N. C.
 Percell Baskett.....74 E. 128th St., New York, N. Y.
 Guy Warner Bass.....33 Bartlett St., Asheville, N. C.
 Carlos E. Battle.....307 Huffman St., Greensboro, N. C.
 John R. Blackburn.....Wilkesboro, N. C.
 Hildred Bright Blair.....101 W. 112th Street, New York, N. Y.
 John W. Bluford, Jr.....1529 W. Pike St., Philadelphia, Penn.
 Colton Boone.....Rt. 1, Fayetteville, N. C.

Nettie Cooper Boyette.....	Bowden, N. C.
Agnes Juanita Brown.....	602 Douglass St., Laurinburg, N. C.
Willie Bernard Bryan.....	225 Dutton St., Orangeburg, S. C.
Arnell Burrus.....	1070 Stebbins Ave., Bronx, N. Y.
Samuel Reuben Burton, Jr.....	1619 Nolan St., San Antonio, Tex.
Maceo Camp.....	49 Elizabethtown Rd., Lumberton, N. C.
Lawrence Carpenter.....	Rt. 2, Box 282, Morganton, N. C.
Robert Uriah Carter.....	Maysville, N. C.
Jasper Alexander Cherry.....	519 S. 12th St., Hickory, N. C.
Alexander Clark.....	602 Cameron St., Chapel Hill, N. C.
Carey Welton Cogdell.....	Box 332, St. Pauls, N. C.
Turner Ruffin Coggins.....	Star Route, Windsor, N. C.
Leon Coleman.....	Box 273, Halifax, Va.
Lorenzo Collins, Jr.....	124 Freemason St., Edenton, N. C.
Walter H. Collins.....	4304 44th Ave., Birmingham, Ala.
Marshall Harris Colston.....	706 E. High St., High Point, N. C.
Donnell Cooper.....	211 Sycamore St., Oxford, N. C.
Jordon J. Corbett.....	P. O. Box 139, Pierce, Fla.
Ruby Lea Corry.....	1000 Depot Street, Gaffney, S. C.
Albert S. Crawford.....	823 Illinois Ave, Jeffersonville, Ind.
Robert L. Daniels.....	403 N. Dudley St., Greensboro, N. C.
Annie Lorena Davis.....	114-16 178th Place, St. Albans, N. Y.
Anthony Davis.....	105 Dean Street, Greensboro, N. C.
Thomasina Marion Davis.....	909 Walnut St., Columbia, S. C.
Fred Dawson.....	1205 Olga St., High Point, N. C.
Azalea Douglass.....	1817 Edwin St., Charlotte, N. C.
Nathan Ryals Elder.....	1032 Pine St., Cincinnati, Ohio
Ray Allen Evans.....	1008 Leonard St., High Point, N. C.
Clarence Arthur Eubanks, Jr.....	64 Monroe St., Lynchburg, Va.
Oliver Faust.....	603 Moon St., High Point, N. C.
David Feggins.....	Box 1053, South Hill, Va.
Robert James Ferguson.....	3961 Bott St., Philadelphia, Pa.
Howard Anderson Foard..	Immanuel Lutheran Col., Greensboro, N. C.
Levi Elihu Fonville.....	28 Railroad St., Jacksonville, N. C.
Leophas Ford.....	405 Regan St., Greensboro, N. C.
Otis Leon Ford.....	Rt. 2, Box 1066½, Cheraw, S. C.
George Julian Foster.....	1903 Albany St., Greensboro, N. C.
Louise Raiford Fox.....	901 Lincoln St., Greensboro, N. C.
Ezelle Clemon Gaffney.....	193 N. Thompson St., Spartanburg, S. C.
Willie Mae Garner.....	1709 11th St., Greensboro, N. C.
Athie Lee Garrison.....	1345 13th St., S. E., Canton, Ohio
Ruby Alfreda Goodlett.....	37 Forest St., Greer, S. C.
Edgar Lee Gore.....	Box 44, Southport, N. C.
George Thomas Gray.....	68 Horton Ave., New Rochelle, N. Y.
Lee Edward Grice.....	311 Gregg St., Marion, S. C.
Alice D. Hall.....	P. O. Box 612, Reidsville, N. C.

William Louis Hardy.....1027 N. Mount St., Baltimore, Md.
 Otto Delano Harris.....615 Nantucket St., Greensboro, N. C.
 George Augusta Harrison.....709 Browns Ave., New Bern, N. C.
 Chester Cooper Hawkins.....Box 92, Jackson, N. C.
 Howard Hickman.....1201 Gray St., Greensboro, N. C.
 Annie Elnora Highsmith.....715 S. 12th St., Wilmington, N. C.
 Eugenia B. Hill.....Rt. 2, Box 95, Brown Summit, N. C.
 Roy Leeuwenhoek Hill.....449 N. Dearborn St., Philadelphia, Penn.
 Walter Parks Holmes.....1312 Ellison St., Charlotte, N. C.
 Melvis Hooper.....321 Orange Ave., N. E., Roanoke, Va.
 Jonathan House.....1306 B. Mills St., Greenville, N. C.
 Helen Sarah Howell.....101 S. Grove St., Asheville, N. C.
 Hornsby Howell.....261 Fairview St., Athens, Ga.
 Edward Stanley Irvin.....133 Central Ave., St. Augustine, Fla.
 Nathaniel Clayton Jackson.....Rt. 2, Box 57-A, New Bern, N. C.
 Robert Herman Jackson.....467 Willow St., Allentown, Penn.
 Douglas Louis James.....1614 Garcia Ave., Tampa, Fla.
 John W. Jeffries, Jr.....Rt. 3, Box 179, Mebane, N. C.
 Robert Jeffries.....Gen. Delivery, Warrenton, N. C.
 Thelma Sandra JohnsonEagle Rock, N. C.
 Willard Clay Johnson.....1612½ McConnell Rd., Greensboro, N. C.
 Emily Cooper Joseph.....443 N. Dudley St., Greensboro, N. C.
 Emmett Joyner.....Southport, N. C.
 Martha A. Kelley.....Box 433, Clinton, N. C.
 Julius Broadus Kilgore.....407 Green Ave., Greenville, S. C.
 Clarence Frank Kimber.....82 Spruce St., Stamford, Conn.
 Joshua Emanuel King.....Rt. 2, Box 260-A, Washington, N. C.
 George Clifton Knox.....Gen. Delivery, Landis, N. C.
 Luke Langley.....Rt. 3, Box 290, Washington, N. C.
 Gertrude G. Lee.....Box 698, Chapel Hill, N. C.
 James Henry Lilly.....109 Reade St., Greenville, N. C.
 Marion Jane Linney.....Rt. 1, Hiddenite, N. C.
 Werren B. Lone.....233 N. Cleveland Ave., Winston-Salem, N. C.
 James Alexander Long.....202 Spencer Ave., Winston-Salem, N. C.
 Alonzo A. Lutz.....Box 644, Newton, N. C.
 Vanell Julia McClendon.....2603 Lake Ave., Tampa, Fla.
 James Ralph Malloy, Jr.....Box 253, Maxton, N. C.
 Mabel Cummings Martin.....Rt. 1, Box 248, McLeansville, N. C.
 Myrtle Balasco Martin.....606 S. Warren St., Mobile, Ala.
 Grelia A. Mason.....Box 139, Woodsdale, N. C.
 Pauline Jenkins Mickens.....2228 Washington St., Columbia, S. C.
 John Clifford Miller.....Fleetwood, N. C.
 Susie Augusta Miller.....2409 Albany St., Brunswick, Ga.
 Flora McAllister Moore.....1505 Lindsay St., Greensboro, N. C.
 Almena Muldrow.....Box 734, Sumter, S. C.
 William B. Neal, Jr.....2411 Charlotte St., Greensboro, N. C.

James Nichols.....	120 Linden St., Fairmont, N. C.
Isaiah Vincent Oglesby, Jr.....	722 Rockwell St., Sandusky, Ohio
Serena Elizabeth Owens.....	22-A Short St., Charleston, S. C.
Norman Page, Jr.....	127 Seco St., Monroe, N. C.
Dorothy G. Palmer.....	Rt. 4, Box 47, Sanford, N. C.
Carrie Mae Parker.....	1109 Morris St., Greensboro, N. C.
Alphonso Parks.....	1013 E. Madison St., Baltimore, Md.
Charles H. Patterson.....	Rt. 4, Box 92, Kinston, N. C.
Bessye Hood Penn.....	1108 McGee St., Greensboro, N. C.
Napoleon Franklin Penn.....	94 W. 25th St., Winston-Salem, N. C.
Mary Handy Purnell.....	2601 E. Market St., Greensboro, N. C.
Osha Lea Rankin.....	Rt. 2, Box 430, Greensboro, N. C.
Phillip Leon Rayford.....	526 Patton Ave., N. W., Roanoke, Va.
Lucy Gyline Reed.....	Rt. 2, Box 49, Stony Creek, Va.
Mary Frances Reed.....	Box 387, Waverly, Va.
Major Franklin Reid.....	501 Boyd St., Greensboro, N. C.
Robert Rhinehart.....	512 Haywood St., Greensboro, N. C.
Royal Nathaniel Roberts.....	Box 81, Gulf, N. C.
Lillie B. Robinson.....	821 Green St., Rock Hill, S. C.
James Voltaire Setzer.....	369 Worth St., Mount Airy, N. C.
Argie Lula Smith.....	Rt. 1, Box 86, Warsaw, N. C.
Rudolph Webb Snowden.....	P. O. Box 185, Aurora, N. C.
Herman DeWitt Springs.....	1004 E. Stonewall St., Charlotte, N. C.
James Wesley Stanton.....	312 E. Cabarrus St., Raleigh, N. C.
Mozelle Williams Tarpley.....	3040 Randleman Rd., Greensboro, N. C.
George S. Taylor.....	143 Dudley St., Greensboro, N. C.
Willie H. Taylor.....	Box 90, Hookerton, N. C.
Ruby Lee Terry.....	Spring Hope, N. C.
Mary Ruth Thomas.....	Box 358-B, Wilmington, N. C.
Alberta Walker.....	Box 313, South Boston, Va.
Mack P. Walker.....	710 Reaney St., Chester, Penn.
Mattie Lee Walker.....	109 Castle St., Avon Park, Fla.
James Edward Ward.....	Rt. 1, Box 118, Portsmouth, Va.
James S. Watts.....	710 21st St., N. E., Washington, D. C.
Robert L. White.....	807 E. Hill St., Charlotte, N. C.
John Wilcox, Jr.....	736 Harlem St., Youngstown, Ohio
William Isaac Wilder.....	404 Banks St., Greensboro, N. C.
Edith Thelma Williams.....	Rt. 2, Box 205, Batesbury, S. C.
Isaac Woodard.....	406 E. Main St., Smithfield, N. C.
Jacqueline Delores Woods.....	4422 Georgia Rd., Birmingham, Ala.
Macy Palmer Wright, Jr.....	Box 491, Warrenton, N. C.
Robert L. Young.....	421 N. Dudley St., Greensboro, N. C.
James C. Yourse.....	910 Douglas St., Greensboro, N. C.

MASTER OF SCIENCE IN RURAL EDUCATION

- Louise Gunn Faucette, B.S., A. and T. College, 1936. Thesis: Modern Aids in Teaching the Social Sciences in the Sixth and Seventh Grades of Lee County Training School, Sanford, North Carolina.
- Otis T. Gerringer, B.S., A. and T. College, 1938. Thesis: An Occupational Survey of the 11th and 12th Grades of the Madison High School to Determine What Type of Guidance Program may be used in the School.
- Robert T. Hoffman, B.S., A. and T. College, 1936. Thesis: A Plan for the Consolidation of the Negro Schools in District Five of Montgomery County in the State of North Carolina.
- Edward Christopher Johnson, B.S., Wilberforce University, 1934. Thesis: A Comparative Study of Scores Made by Three Groups of Reserve Officers Training Corps Students Who are Regularly Enrolled at The Agricultural and Technical College of North Carolina.
- Thomasena N. Miller, A.B., Bennett College, 1932. Thesis: A Survey of the Socio-economic Conditions of the Negro Population of Martin County with Suggestions for the Utilization of such Data by the Schools.
- Lena M. Purnell, B.S., A. and T. College, 1942. Thesis: A Comparative Analysis of Negro and White Schools of Accomac County, Virginia, 1942-1948.
- Mattie Clyde Robinson, B.S., A. and T. College, 1942. Thesis: The Construction and Evaluation of a Remedial Reading Program in Fairview School, High Point, North Carolina, with Remedial Procedures as a Help to Slow Readers in Grades II and III.
- Carrye Mae Ross, B.S., A. and T. College, 1939. Thesis: A Study to Determine Pupil Responses to Arithmetical Problems Presented in Sentence and Example Forms.
- Glen Thomas Spencer, B.S., Elizabeth City Teachers College, 1946. Thesis: Correlation between English Placement Test form X-2 Scores and Freshman English Course Averages for One Hundred and Eighty-eight Freshmen of The Agricultural and Technical College of North Carolina.
- Irene Rogers Strickland, B.S., A. and T. College, 1940. Thesis: The Causes of Juvenile Delinquency in a Rural Community and Proposals for Reducing Its Incidence.
- Gladys Davis Woods, B.S., A. and T. College, 1938. Thesis: A Study of Character Education in the Primary Grades of the Greensboro Public Schools.

ENROLLMENT BY COUNTIES IN NORTH CAROLINA

Alamance	35	Jones	23
Alexander	10	Lee	14
Anson	29	Lenoir	38
Ashe	5	Lincoln	2
Beaufort	12	McDowell	2
Bertie	12	Martin	7
Bladen	21	Mecklenburg	59
Brunswick	23	Montgomery	8
Buncombe	13	Moore	20
Burke	8	Nash	15
Cabarrus	25	New Hanover	24
Caldwell	3	Northampton	35
Camden	3	Onslow	17
Carteret	16	Orange	20
Caswell	9	Pamlico	3
Catawba	10	Pasquotank	21
Chatham	19	Pender	16
Chowan	14	Perquimans	10
Cleveland	51	Person	28
Columbus	21	Pitt	59
Craven	29	Polk	3
Cumberland	26	Randolph	7
Currituck	4	Richmond	15
Dare	2	Robeson	46
Davidson	11	Rockingham	31
Davie	5	Rowan	36
Duplin	24	Rutherford	21
Durham	51	Sampson	25
Edgecombe	20	Scotland	10
Forsyth	97	Stanly	7
Franklin	12	Stokes	4
Gaston	6	Surry	7
Gates	17	Swain	3
Granville	20	Transylvania	4
Greene	10	Tyrrell	3
Guilford	394	Union	17
Halifax	47	Vance	19
Harnett	17	Wake	76
Henderson	2	Warren	51
Hertford	25	Wayne	40
Hoke	4	Washington	9
Hyde	6	Wilkes	5
Iredell	6	Wilson	55
Jackson	3	Yadkin	1
Johnston	36		

ENROLLMENT BY STATES**1950-51**

Alabama	31	New Jersey	28
Arkansas	1	New York	34
California	1	North Carolina	2129
Connecticut	2	Ohio	38
Delaware	2	Oklahoma	1
District of Columbia	18	Pennsylvania	34
Florida	87	Rhode Island	1
Georgia	32	South Carolina	227
Illinois	7	Tennessee	8
Indiana	5	Texas	3
Kentucky	2	Virginia	276
Louisiana	5	West Virginia	7
Maine	1	Wisconsin	2
Maryland	20	Wyoming	1
Massachusetts	8	British West Indies	1
Michigan	4	Puerto Rico	8
Minnesota	3	West Africa	1
Mississippi	4		
Missouri	1	TOTAL.....	3033

SUMMARY OF ENROLLMENT**1950-51**

Senior Class.....	507
Junior Class	494
Sophomore Class	532
Freshman Class	660
Special	59
Unclassified	92
Graduate	194
Trade School	495

TOTAL

Total Enrollment, excluding duplicates, regular session, 1950-51	3033
Summer Quarter, Undergraduates, 1950	903
Summer Quarter, Graduate Students	385

GRAND TOTAL 1950-1951

INDEX

	Page		Page
Admission to College.....	31	Graduate, Teaching Certificates	73
Agricultural Economics	81	Graduation Regulations	39, 60, 62
Agricultural Education	78	History	178
Agricultural Engineering	171	Home Administration	130
Agriculture, Basic Curriculum	57	Home Economics, Basic Curriculum	57
Agriculture, School of	55	Home Economics Education	80
Animal Husbandry	85	Home Economics, Dept. of	126
Animal Industry	84	Honor Roll	36
Architectural Engineering	87	Honors and Awards	203
Art (See Fine Art also)	118	Incompletes	34
Auto Mechanics	186	Industrial Arts Education	131
Awards, 1950	203	Industrial Education	138
Bacteriology	90	Institutional Organization	55
Biochemistry	102	Majors and Minors	61
Biology	90	Marking System	33
Board of Trustees	7	Masonry	187
Botany	91	Master's Degree, Candidacy	70
Business Administration	93	Mathematics	140
Cabinet Making	192	Mechanic Arts, Freshman Curriculum..	60
Calendar, College	3	Mechanic Arts, School of	59
Calendar, 1951-52	2	Mechanical Engineering	145
Carpentry	190	Medical School Admission	65
Changes in Schedule	35	Military Science and Tactics	149
Chemistry	102	Music	152
Chemistry, Dept. of	101	Nutrition	129
Child Development	127	Officers of Administration & Inst.....	9
Classification of new students.....	32	Ornamental Horticulture	174
Clothing	128	Out of State Students	53
College, Admission to	31, 59, 61, 68	Physical Education	157
College Buildings	27	Physics	166
College, History of	26	Plant Industry	171
College Publications	4	Plumbing	194
Commercial Education	96	Political Science	180
Dairy Husbandry	86	Poultry Husbandry	86
Degrees	40, 69	Pre-Medical Course	65
Degrees, Conferred 1950	208	Religion and Ethics	176
Department	37	Research	176
Description of Courses	78	Rural Sociology	84
Dormitory Provisions	38	Schedule Regulations	31
Dormitory Regulations	38	Scholarship	36
Economics	183	Scholarships	44, 49, 68
Education	104	Senior Research	63
Education and Science, School of.....	61	Shoe Repairing	189
Electrical Engineering	110	Social Science, Dept. of	177
English	115	Sociology	186
Enrollment by Counties in N. C.....	219	Soils	175
Enrollment by States	219	Sophomore Courses	65
Enrollment Summary	219	Spanish	126
Examination, Comprehensive	177	Steamfitting	194
Examinations, Quarterly	37	Student Load	33
Expenses and Fees	48, 52, 72	Student Organizations	40
Extracurricular Activities	36	Students, Boarding	38
Evening School	47	Students, Non-resident	38
Family Relationship	127	Summer School	47
Field Crops	172	Suspension	38
Foods and Nutrition	129	Teachers' Reports, Daily	37
Foreign Languages	123	Teachers' Reports Quarterly	37
Fraternity Houses	37	Tailoring	195
French	124	Textiles	128
Freshman Courses	64	Thesis	70
Freshman Week	31	Trade Certificates, 1950	206
Fruits	173	Upholstering	192
General Science	91	Vocational Education	137
Geography	181	Vocational Courses, Elective	198
Geology	174	Welding	197
Grade Points	34	Women, Opportunities for	66
Graduate School	67	Zoology	92



